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COURSE OF

LECTURES ON THE BLOOD,

AND ON

THE CHANGES WHICH IT UNDERGOES DURING DISEASE,

Delivered at the College of France in 1837-8,

BY

M. MAGENDIE.

LECTURE XIX.

Substances which affect the coagulability of the blood.—Action of bloodletting.—Pathological appearances of animals.—Experiments to determine the action of gases on the blood: oxygen, nitrogen, carbonic acid, chlorine.—Action of wines.—Do substances act differently on the blood when introduced into the stomach and injected into the veins?—Mode of formation of the buff.

GENTLEMEN:—It results from our experiments on the coagulability of the blood that the more we remove of the fibrine of that fluid in an animal, the more completely the portion left behind loses the characters of fibrine, and assumes different qualities, which give it the aspect of a new product. The substance so altered is, certainly, no longer true fibrine, yet it still resembles that principle strongly; so that there has rather been an imperfect transformation effected than a total disappearance of the proximate principle in question. This pseudo-fibrine, for so, you are aware, I have ventured to name the substitute for the real fibrine, does not possess the faculty or property of preventing the blood from becoming extravasated; although it be dissolved in that fluid and circulate with it, morbid exhalations into the substance of the tissues, between the tunics of the intestines, into the parenchyma of the lung, on the surface of mucous membranes, and even into the serous cavities, supervene. The blood propelled forward by the left ventricle ceases to follow the course of its tubes; it oozes through their walls just as if these were formed with holes like a sieve. We are well acquainted with the anatomical characters of these artificial diseases, and what particularly struck us in them was, their strong resemblance to those met with in certain malignant fevers, designated by ancient authors by the epithet *putrid*. In the first place, let us inquire into the signification of this term. It gives expression to a correct idea, if we are to judge from the advanced decomposition of the defibrinised dog before you. The animal died only yesterday, and he is already in a state of putrefaction. The same phenomenon is observable in what are called typhoid affections; a nauseous smell is exhaled from the body during the life of the individual: the sweat, the pulmonary exhalation, the gases rejected from the stomach, and the alvine evacuations, are all of them distinguished by a characteristic fœtor. Scarcely have a few hours elapsed after death before the putrefactive fermentation sets in in the tissues; the solids lose their cohesion, the liquids their ordinary aspect.

The most extensively affected organ in this animal is the lung; and in like manner it is by no means rare to see the pulmonary circulation become embarrassed during convalescence from acute diseases, and the patient perish of what is called intercurrent pneumonia. Why this complication at the very time that all the functions were re-acquiring their healthy characters? The reason of its occurrence is to be found much less in the nature of the preceding disease than in the treatment adopted for the cure of this. There can be no doubt that cases exist in which venesection may do much good, but there are others wherein a single and, *à fortiori*, several bleedings, may do serious mischief. The universal practice of the ordinary run of medical men consists in opening a vein whenever the pulse is in the least frequent at the outset of an acute disease. If recovery take place shortly after, they maintain they did well to bleed, for by so doing they prevented the occurrence of inflammation; if the disease follow its course, they congratulate themselves still more warmly on having let the patient blood, and only regret their having drawn too little. It is true that they who employ venesection according to the formula recently

proposed by one of the Professors at the School of Medicine, will have no occasion to reproach themselves with the latter delinquency; but as the method in question is by no means a new one, it is needless for me to express an opinion concerning it, for experience has long since decided on its value; suffice it to say that it is, at the least, exceedingly doubtful whether it be always the *disease* that is *jugulé*.* But to return: I told you that when a first bleeding fails, a second, a third, a fourth, nay, a still greater number, are frequently had recourse to. These repeated bloodlettings not only diminish the mass of blood in circulation, but also alter its constitution. Now, as aqueous drinks, absorbed by the veins, are the sole means wherewith the patient is allowed to replace the blood he has lost, it follows that that fluid loses its proper share of viscidity and coagulability, and acquires, proportionally, a tendency to extravasation. When we observe obstruction of the pulmonary circulation supervene towards the decline of acute affections that have been vigourously treated by bloodletting, it is rational to suppose that the escape of the blood from its vessels is due to its having lost its normal properties. You persist in bleeding, and the severity of the symptoms increases; it is fair to inquire if it be not these bloodlettings that hasten the fatal termination of the cases.

This dog has presented another phenomenon which we had already witnessed, though in an inferior degree, in other animals submitted to similar experiments; I mean an œdematous infiltration of the extremities. While the trunk is remarkable for its meagreness, the limbs are rotund, and the skin investing them tense, just as if they had not participated in the general emaciation; but a few incisions of my bistoury show you how this seeming plumpness is caused; they are followed by a flow of reddish serosity, which had escaped from the blood-vessels into the surrounding cellular membrane. It is not simply transparent serum, for a certain quantity of disorganised globules are mingled with it, giving the whole the appearance of slightly viscous water, holding a few drops of blood in solution.

The same phenomenon is frequently observed towards the close of chronic diseases, and ranks among their most serious symptoms; there is not a nurse in our wards who does not know that death is to be feared when the legs begin to swell. Perhaps their scientific attainments are not so great as to enable them to affirm that in such cases there is atony of the *absorbents*, or superactivity of the *exhalents*; but if they are excusable for their ignorance of such explanations, those medical men are not so, who accept, and above all, who profess them at the present day. It is evident that such œdema depends on the weakened contractions of the ventricle, and on the consequent accumulation of the blood in the capillaries, which leads directly to its extravasation. Besides this, the composition of the blood itself must take a part in inducing its escape from its vessels; here are patients who had for a long time been submitted to more or less complete abstinence from nutritious food, after having first lost by venesection all the blood in their bodies except what was absolutely indispensable for the support of life; the proportional quantity of fibrine must have diminished. Is there no analogy to be established between the history of these patients and that of our defibrinised dogs? I shall continue this inquiry in my next lecture; meanwhile to our experiments on the influence of various agents on coagulation.

Before describing the results of my experiments on the admixture of various gases with the blood, it may be well to remind you in a few words of the essays hitherto made in this direction. Towards the close of the eighteenth century, soon after the separation of the principal constituents of atmospheric air had been effected by the chemists, it was believed for a while that the means of prolonging life to an indefinite period had been discovered. Inasmuch as oxygen, said the chemists, is the vivifying part of the fluid we respire, and enters in the proportion of a fifth into the composition of the atmosphere, the action of the latter will be rendered more and more salutary by the artificial addition of the former element. No sooner was the conception formed than it was put in execution, and you might have seen phthisical, strumous, and cachectic patients generally, inhaling pure oxygen. It was soon found, however, that the results obtained were widely different from those so sanguinely calculated on, and the originators of the plan were obliged to admit its practical inapplicability. The study of the action of gases at that period appears to have been limited to the effects produced on the colouration of blood and on respiration. It was easily ascertained that animals do not breathe better in a medium one-half formed of oxygen, than in the natural atmospheric combination of gases; it was also remarked that other substances possessed the property of giving the blood the scarlet tint characteristic of that contained in the arteries; but, so far as I am aware, no attempt has ever yet been made to learn what influence different aeriform fluids might exercise on the coagulation of the liquid in

* The term employed by M. Bouillaud to signify that inflammations are instantaneously arrested in their progress,—an effect which he attributes to his plan of copious bloodlettings, repeated frequently and at short intervals.

question. The utility of such an inquiry seems to me so evident that I think it unnecessary to dwell on the points which render it incontestable. Besides, it came as a natural supplement to my previous researches. To proceed at once, then, to the experiments I have performed:—

1*st Experiment.*—Oxygen.

This glass vessel contains a mixture of pure oxygen and blood, the gas having been introduced into it before the liquid. In proportion as I allow the mercury, which fills the lower part of the vessel, to escape, I observe that a certain quantity of serum accompanies it. It would appear that the serous portion of the blood is, in this instance, subjacent to the clot, which is of a scarlet red colour, firm, and perfectly coagulated. As was to be expected, the oxygen has been partially absorbed, just as occurs in our respiratory organs; the serum which I have separated from the mercury is slightly coloured in consequence of its having dissolved some of the globules; I shall examine this liquid under the microscope.

2*nd Experiment.*—Oxygen.

In this instance the blood was first introduced into the vessel, next the oxygen. There are about two lines deep of serosity placed underneath the clot, which presents the same appearance as that we have just examined. It would appear to result from these observations that oxygen facilitates coagulation, inasmuch as the part of the fluid in contact with the gas formed sooner, and with greater firmness, into a mass, than that which was far removed from it. Both clots are especially remarkable for their solidity.

3*rd Experiment.*—Nitrogen.

In this instance no absorption of the gas employed has taken place; half of the serum lies above, and half below the clot; the latter has no vermillion tint at the points of contact with the gas. I remark that it is not vermillion-coloured, because arterial and not venous blood has been employed in all these experiments. The clot adheres, as in the other cases, to the inside of the vessel. The result of this experiment would appear to show that nitrogen does not prevent solidification.

4*th Experiment.*—Carbonic acid.

Here there is a brownish red colour developed, approaching to black; the serum is reddish, and lies above the clot; the latter is tolerably firm; consequently this gas does not, as has hitherto been maintained, oppose coagulation; the phenomenon has taken place almost as perfectly as in oxygen.

5*th Experiment.*—Oxide of carbon.

This gas is esteemed of very deleterious nature; it has not been absorbed in the present case. The coagulum, for there is one here, too, is firm, and presents a brilliant surface superiorly, where it is bathed in deep red serum. We must repeat these experiments on living animals, in order to ascertain if the results will then be similar.

6*th Experiment.*—Quadro-carburet of hydrogen.

This gas, which is that used for lighting, has allowed of the formation of a firm clot; this latter presents a peculiarity which we have not remarked in any of our experiments, namely, a violet colour. The serosity is perfectly limpid, and distinct from the clot.

7*th Experiment.*—Cyanogen.

Here is a gas which, in various states of combination, is much employed in medical practice; it has been more abundantly absorbed than any other. It is probable that this depends on the alkalinity of the blood, for the gas in question has, as you are aware, a strong tendency to combine with alkalies. The clot is black, solid, very firm, retracted towards its centre, and suspended in the middle of the vessel; this peculiar retraction explains the fact of the serum being subjacent to the rest.

8*th Experiment.*—Chlorine.

Chlorine has, in the vessel I now show you, acted so energetically, that complete decomposition has resulted in the blood brought in contact with it. These black patches which you observe closely adherent to the sides of the vessel cannot, certainly, be called blood, though I know not how to designate the chemical combination forming them. The result of this experiment points out the temerity of recommending the inhalation of this gas in pulmonary phthisis, chronic catarrh, &c.

I have made a few experiments on the salts of morphia, choosing those most frequently employed in medicine. The hydrochlorate has given the blood a scarlet colour; the sulphate has produced a similar effect; the acetate has tinged the liquid deep brown, and appears to have exercised a particular action on the albumen.

I have, besides, made some essays with the fluids in habitual use as drinks, with the following results:—

1*st Experiment.*—Claret.

This wine, mingled with a small proportion of blood, has not coagulated it, but has allowed of the transudation of a small quantity of serum.

2*nd Experiment.*—Ordinary wine.

This fluid has produced a very well marked change in the natural state of the blood: the albumen is agglomerated at the upper, and there is a small clot at the lower part of the vessel.

3*rd Experiment.*—Claret and water.

The effect produced in this case is very much the same as in the preceding.

4th and 5th Experiment.—Beer and cider.

These liquors have precipitated the albumen and prevented the formation of a coagulum.

The action of the different bodies, just passed in review, on the blood, cannot be considered as irrevocably fixed by these experiments; almost all of them will require to be frequently repeated and varied in their mode of performance before we can feel any confidence in the correctness of our conclusions.

I have made a microscopical examination of some of these mixtures, which led to the establishment of the following particulars. I discovered a mass of globules of the ordinary shape in the blood brought into contact with oxygen, remarkable for the indistinctness of their central point; besides these were to be seen a great quantity of other globules, resulting from the union, I would almost say, the agglutination, of smaller globules, and resembling pus pretty closely; and, finally, some of these same last described bodies, separated from each other and floating in serosity. In order to see them more distinctly, and determine their form accurately, I mixed them with the serosity of another specimen of blood, but to my great astonishment they dissolved in this added fluid and disappeared totally. These lenticular bodies, which are evidently of a distinct species, and had never been previously observed, either by myself or, to judge from their writings, by other physiologists, appear to me to have been developed under the influence of the oxygen. I am, however, unwilling, of course, to make any affirmation on such scanty evidence: although experience has so far taught us in reference to our present investigations that the phenomena occurring in our glass vessels take place in the same manner in the interior of the animal economy, I think it necessary, in the present instance, to make a further experiment. The one I have in view is this: we will bleed a healthy animal, examine its blood under the microscope, and ascertain the form of its globules; next we will cause the animal to breathe pure oxygen, and then extract, as expeditiously as possible, another sample of blood, with the knowledge that it must have just been in contact with the gas; we shall thus see whether globules of the kind just alluded to, are produced by the cause presumed or not.

In some blood mixed with hydrosulphuric acid gas I found some globules which had undergone no morbid alteration, and, besides, an innumerable host of globular points, half white, half black, as though a line of intersection had separated an ordinary globule into two parts. But the most remarkable point connected with these globules was, that they appeared to execute movements, to oscillate in various directions, with extreme rapidity, describing curved, straight, or irregular lines, just as is done by the microscopic animalcules termed *monads*. This result of the action of sulphuretted hydrogen on the blood is really curious, and deserves to be made the subject of further experiment.

Nitrogen alters in nowise the conformation of the globules, or of the agglomerations of minuter globular bodies already mentioned in the instance of the oxygenated mixture. The actions of these two gases, which may be said to constitute of themselves the air we breathe (for hydrogen and carbonic acid enter only accidentally into its composition) would appear to be very closely analogous.

All I was able to detect in the mixture made with cyanogen gas was a mass of globules, among which were numbers possessing the normal characters, and a variety without them as well.

Such are the most remarkable facts elicited by our examination; they are, it is true, not of a very decided character, nor directly applicable to practice, still they are far from being to be despised. They will serve as guides for our ulterior investigations; and these will on the whole, I am persuaded, benefit the science we cultivate.

Allow me now, Gentlemen, to draw your attention again to a question of extreme importance, and one to which no decisive answer has hitherto been obtained. You remember the remarkable fact I particularly noticed at our last meeting but one, namely, that a substance which proves perfectly innocuous when ingested into the stomach, may become deleterious, and even cause death in a few moments, if injected into the veins. The reason of this—this vital problem, as it may be called—appears to me well worthy of being fathomed, and, with a view of doing so, I made several new experiments, the chief results of which you shall learn in a few words. A small quantity of claret injected into the veins of an animal caused almost instantaneous death: half a bottle of this same wine introduced into the stomach of another determined no more serious effect than a state of complete intoxication. Here is the fact we must strive to explain; its consequences in a therapeutical point of view are really immense, and this of itself entitles it to our maturest consideration. I still believe that the explanation I offered the other day was the true one;—that the less powerful effect produced by substances submitted to the action of the stomach, is ascribable to the slowness of absorption. I shall be ready to surrender this opinion the moment proofs of its want of solidity are adduced by any one, but so far I have only met with facts to all appearance confirmative of it. Thus, I injected a small dose of soluble cream of tartar into the vascular system of an animal,

and he perished shortly after. On the other hand, I gave a dog two ounces of the same substance, and he was not in the least incommoded thereby. We may account for the difference in the results of these two experiments, by the presence in the one, and the absence in the other, of an abrupt and instantaneous action on the mass of the blood. Let us take another example, and truly they are not difficult to find: an animal swallows ether; the liquid, after a passage of more or less length, according to the dimensions of the œsophagus, reaches the stomach, and is there, like all volatile substances, imbibed or absorbed. In the coats of that viscus it meets with a sort of seive or filter, which only allows of its passage molecule by molecule; it no doubt passes thence directly into the blood, but its admixture with that fluid is gradual and in the most minute proportions at a time; besides, scarcely has it been in contact with it, when it is borne along to the lungs. I purposely omit to mention the lymphatic vessels; for it would require to be far behind the science, as it exists at the present day, to attribute the principal part in the function of absorption to those vessels; of this some experiments of mine, long since performed, have left not a doubt. But, to return to the ether—in proportion as it enters the respiratory organs, it is in part thrown off from them by the process of pulmonary exhalation. In this case you see why the action of the substance on the blood is so powerless—a small quantity only of it can ever be said to be in contact with that fluid; and, further, it only passes through it, and, as it were, has no time to act. This is the case, too, with all other substances of the volatile or odoriferous classes, such as camphor, phosphorus, &c.

There are other matters which, instead of escaping from the economy by means of pulmonary exhalation, do so by particular emunctories; the kidney appears especially designed for such offices. Thus, sulphate of quinine, hydrocyanate of iron, nitrate of potassa, &c., have been found in the urine after the administration of those salts by the mouth. Absorbed in the intestinal canal they slowly reach the kidneys, and subsequently the bladder, whence they are excreted. I have an animal at present on a diet of "sulphuric lemonade," and will examine its urine to ascertain whether that fluid contains any proportion of the acid consumed as drink, for it is exceedingly important to establish why this substance kills when carried directly into the circulating system, whereas when taken by the stomach it determines no troublesome symptoms, except when its use has been long and immoderately persisted in.

In these different glass vessels we have mixtures of blood and various neutral tartrates. These salts do not appear to impede coagulation; on the contrary, the larger the proportion in which they enter into the mixture, the more solid we find the resulting coagulum.

The subject to which I next propose to direct your attention is one of deep interest, as is testified by the numerous discussions to which it has given rise; I mean the influence of pus on the blood. You are well aware of the nature of the important part which this organic product is made to play by the pathologists of the present day. Observe, then, I beg of you, the results in the vessels before you. Here have been mixed equal volumes of blood and normal pus, and you see that the colour only is changed, for the clot has formed in the most perfect manner But here, on the other hand, is a mixture of artificial serous pus, water and blood, which presents a very different appearance; the colouring matter floats on the top, and is partially dissolved in the serosity; the globules are few in number, and there is no coagulum. It is clear, then, that normal pus has not prevented the phenomenon of coagulation from taking place, while the contrary is the case with the serous pus; and you will recollect that it is only when pus occurs in this latter condition that the formidable symptoms ascribed to its absorption are seen to be developed,—that *laudable* pus, to adopt the medical phraseology, never gives rise to them.

In this third vessel, a larger quantity of water has been added along with the pus; no coagulation has occurred, but a greater number of globules are visible. In this fourth vessel, which I now show you, the globules are separated from the remainder of the mixture, which consists of a non-coagulated mass of blood and pus. Hence all these experiments go to corroborate the inferences we drew in the first instance; for still further certainty we will repeat them on the living animal.

I may here mention to you a fact which bears on the question of the passage of liquids into the blood. I injected some natural Barrèges water into the veins of an animal, which proved fatal; but the important point at the present moment is, that a phenomenon occurred perfectly in accordance with the statement I made a few moments ago; his breath blackened a piece of paper previously soaked in a solution of a salt of lead. This would tend to prove that when these hydrosulphurous waters are used medicinally, they partially escape from the system by pulmonary transpiration.

The blood you see here has been taken from the woman suffering from chorea, of whom I have already spoken to you; it has coagulated in a natural manner, and in this fibrinous and normal net-work you see the result of an admixture of one part of it with nine of sugared water,

We have next to proceed to the autopsy of two animals. The first, whose thorax I now open, underwent an injection of six centilitres of claret, and died forthwith. The lung, you observe, contains extravasated blood, and the probability which this condition of the organ gives of that fluid being in a morbid state, is confirmed on opening the pulmonary artery; its contents are non-coagulated, and resemble currant-jelly. As the animal died in a very sudden manner, the lesions productive of death are confined to the respiratory apparatus: no morbid change had time to be effected in the abdomen.

This second animal was killed by the injection of from two to three centilitres of Barrèges water, twice repeated, into the veins: it is to be presumed that his blood also is in a fluid state. The state of the lung and blood, which is even more decidedly morbid than in the last instance, realises my expectations.

Here is a little guinea-pig which was kept for an hour in an atmosphere of hydrogen gas,—a considerable length of time, as it appears to me. However, our previous experiments lead to the belief that no very marked alteration in the qualities of the blood is to be looked for; accordingly you see that the lung is but slightly affected, and that the vessels contain black but well coagulated clots.

I forgot to mention an important fact to you a short while ago; it is this: one of the animals who underwent the injection of Barrèges water survived the experiment, and it was his blood that was used in the experiments with the gases. Now, this blood was altered in constitution, viscous and blackish, and yet, under the influence of oxygen and of nitrogen, it reacquired its scarlet colour. This leads me to think that in cases where a morbid condition of the blood prevails, as in maliguant fevers, a useful end might be gained by causing the patients to inhale these gases. I will put the idea in practice in the case of some individuals affected with typhoid fever; there is no small share of plausibility in it, especially when we consider the well-known fact that patients labouring under typhus, yellow fever, &c., should be kept as widely apart as possible, and caused to breathe a pure air, so as to allow the blood to come in contact with the principles that vivify it, and thus, in its turn, to bear heat and life to all the organs.

I cannot bring the section of our subject referring to the coagulation of blood more appropriately to a conclusion, than by instituting some inquiry into the formation of what is called the *buff*. This buff is nothing more, as I have already mentioned, than the coagulable matter of the blood, which has separated from the colouring material and solidified apart. It is a pure and simple coagulum, as is proved by the fact of our being able to produce it at will, as you have seen in the case of the numerous parenchymatous and nebulous clots shown you in these lectures. Observations have, it is true, been made on this subject; the opinion has even been advanced that there is a certain degree of analogy traceable between it and the pia mater,—an essentially vascular membrane: thus, in the buff of the horse's blood there are quasi-organised filaments perceptible. However, it is certain that the fibrine separates in some cases from the general mass of the colouring matter to form the buff, but in others the colouring matter participates in its formation. When this white coagulum is acted on with heat, it is easily seen to be composed of two substances, fibrine and albumen. The former consists of filaments which circumscribe spaces wherein the non-organised albumen is deposited. But having established the nature of its constitution the main point remains to be settled. Now, is its formation to be accounted for? In some instances easily enough: here for example, in this vessel were placed four centilitres of sugared water and one of blood; the whole was shaken, then allowed to settle, and after a certain lapse of time the white clot you perceive at the upper part, formed, as the simple consequence of the difference existing between the specific gravities of the bodies brought in contact. Were the density of the serum modified it would gravitate to the bottom of the vessel and the globules rise to its upper part, just as we see the cream rise to the surface of milk.

But there is a further question to be asked:—Why are some specimens of blood buffy and others not so? To this it seems impossible to me to give an answer with our present amount of knowledge. In no single instance, for example, during the last two months in which I have caused blood to be drawn in my wards, has this peculiarity made its appearance; where it does occur there can be no doubt that it depends on the difference of specific gravity of the elements of the blood.

This coagulation of the fibrine occurs under various aspects; in some cases it forms a delicate nebule; in others a clot; in a third set of cases a parenchyma. Medical practitioners have been induced to attribute some importance to the production of these phenomena, because it has been fancied that relations exist between them and certain diseases. I will discuss the reality of these assumed relations in my next lecture,; all I wish to lay down for the present is, that a notable difference exists in the density of the globules and of the fibrine, a fact which is easily understood, inasmuch as it is certain that globules calcined and reduced to ashes contain about from five to seven per cent. of iron.

ON DIGESTION
AND THE
FUNCTION OF THE LIVER.

BY
HENRY ANCELL, ESQ.

It has been generally admitted that the materia alimentaria received into the stomach is thus disposed of. A portion of the liquids passes the pylorus in a very rapid manner to be absorbed by the coat of the intestinal canal; a part also is very rapidly absorbed by the stomach itself. The solids may be divided into two portions; in the first place, those which are soluble in the digestive fluids, and are formed into chyme; in the second place, those which are insoluble, and throughout the whole process excrementitious. The chyme and excrementitious matters passing the pylorus more gradually, mix with the bile, the pancreatic juice, and the succi intestinorum, and the formation of chyle, with an additional portion of excrementitious matter, results. The chyle is received by the chyliferous vessels, and it is believed that it forms the true and *only* source of new materials for the growth and reparation of the living system; the excrementitious substances are converted into fæces, properly so called, and being gradually divested both of chyle and aqueous fluid, and accordingly acquiring increased density, are propelled onward for the purpose of defecation.

The only modification of the theory of digestion, as we find it in treatises, which this statement contains is, that of describing the mass which passes the pylorus as a mixture of chyme, properly so called, and excrementitious materials, instead of "*a homogeneous paste;*" but this is so obviously true, chyme being uniform in its composition, and the mass differing according to the nature of the food, and containing all the crude and indigestible substances taken into the stomach, that it is not necessary to dwell upon it; it may, however, be remarked, that in disordered states of the digestive function, the powers of the stomach with respect to chymification are greatly modified; substances which, in health, admit of being formed into chyme, in a state of disease remain indigestible and excrementitious from the beginning of the process; and with respect to diseases of the stomach, it appears more clearly from this, than from any other view of the chyme, how great an object it is to ascertain, as nearly as possible, what change has taken place in the action of the stomach upon those organic materials which are usually susceptible of chymification.

Passing over a great many theories and disputes respecting different parts of the process of digestion, I am anxious to call attention to the important inferences which seem to arise out of the generally admitted fact that liquids composing part of the materia alimentaria are absorbed from the stomach and intestines, and conveyed directly into the circulation, when this fact is connected with others which have been determined by modern physiologists. Not only the absorption of liquids from the intestinal canal into the venous system, and their direct transport into the general circulation, has been shown to occur, but that of various other substances, has been inferred from experiments on animals, and observations on the human subject. Iodine and turpentine are detected in the urine, and odorous substances, as camphor and ether, in the halitus from the lungs, at a period too early after their introduction into the stomach, to admit of the opinion that they have followed the course of the chyme and chyle; various substances introduced into the stomach with the food during life have been detected in the blood after death, when they could not be detected in the chyle; and a great many substances, as alcohol, musk, assafœtida, and prussiate of mercury, have been shown, by their chemical and sensible qualities, to exist in the blood of the vena portæ and its branches, when there was no trace of them in the fluid of the lacteals and thoracic duct. It is quite clear that whatever substances are carried into the circulation through the parietes of the alimentary canal, they must go directly to the liver, and if not eliminated by it, they must pass through the organ, and afterwards reach the right side of the heart. The proper function of the liver is believed to be that of acting upon the blood, venous or arterial, as the case may be, for the production of the bile, and the production of bile the end in view in furnishing an animal system with a liver. Conjectures have been thrown out from to time that this organ, from its magnitude and situation, must be endowed with some more essential function, but none of these have been generally received as worthy of credence; and yet, if we consider the facts above alluded to which relate to the absorption of liquids and soluble substances from the alimentary canal, and the direction in which they are conveyed, we appear to be furnished with a clue to the true function of the liver, and it seems to me that this subject is worthy the most attentive consideration.

The function of the liver, it is said, is the secretion of bile, but no connection has ever been traced between the alterations of the liver and those of the bile; the bile has been found excessive or diminished in quantity, or vitiated in quality, without any appreciable disease in the liver; the liver, again, is constantly found to be diseased, without any evident alteration in the bile. From this we are forced inevitably to the conclusion that the quantity and the quality of the biliary secretion depend quite as much

upon the quality and quantity of the fluid with which the liver is furnished, as upon the action of the liver itself. M. Magendie proved by experiment that, on changing the food of an animal, we can alter at pleasure the composition of the bile; giving due credit to these facts, the inference is, that to account for changes in the condition of the bile, we must inquire into the condition of the blood of the vena portæ; but this part of the circulating current contains fluids and soluble substances absorbed from the alimentary canal, and accordingly the function of the liver must be, in part at all events, that of producing changes in the last mentioned substances contained in the portal blood. Physiologists, admitting the alterations effected in the nature of the bile by the nature of the ingesta, although aware of the process of venous absorption, have explained them upon the principle that the whole mass of blood is modified by the change of food, through the medium of the chyle, and that this modified blood is submitted progressively to the action of the liver. The opinion that changes in the bile depend upon the nature of the fluid which is conveyed direct from the alimentary canal to the liver, is much more simple, and if on that account alone, deserving consideration; according to it, the function of the liver, instead of being to purify the general circulating fluid, is rather *to prevent the deterioration of the whole mass of blood, by acting at once upon materials taken into the portal system, before they reach the general circulating current.*

Every consideration, with respect to the bile and the liver, leads to the conclusion that the secretion of bile is but a secondary part of the function of the liver. The bile, sometimes containing twenty-six distinct compound substances, including as many as ten earthy or neutral salts, is much more complex than the blood, or any other animal fluid; it is also more variable. When taken from the body after death it is sometimes bland, and admits of being touched and tasted with impunity; at other times it produces pustulous ulcers, and other evidences of highly irritating qualities; and in some instances it acts as a poison. Both in children and adults it has every shade of colour, from black to an almost transparent whitish hue; it is sometimes as thick as tar, or even pitch; at other times as fluid as water. Its chemical components are equally variable: it sometimes consists chiefly of water and albumen; at other times the yellow colouring principle, the resin, or the cholesterine, predominates. The same variability is met with in the colour and consistency of biliary calculi; they may be white, yellow, black,—black externally and yellow internally; and they may consist, chiefly, of one or of another of the numerous component principles of the bile.* All these variations occur without our having been able, up to the present time, with all our acumen and industry in pathological research, to associate them, in the most remote degree, with any corresponding conditions of the liver itself; the inference seems to me clear, that the deposition of bile, or its secretion, is an effect supplementary to the action of the liver upon the fluids circulating in the portal system of vessels. Physiologists, reasoning upon these facts, have, as before remarked, fallen back upon the whole mass of blood, for the purpose of explaining the phenomena, and of supplying a function for the liver; but I submit whether it is not much more probable that the explanation sought for is to be found in the nature of the ingesta, and in the state of the digestive powers in the first passages;—whether the liver is not an organ of digestion, properly so called, occupying the situation which it does for the purpose of preventing the passage into the general circulation of those soluble substances taken up by the branches of the vena portæ, which are likely to prove injurious to life, and for the purpose of affecting the first changes upon other principles, after their absorption, and in order to prepare them for conversion into arterial blood.

The following facts may be cited as confirmatory of this opinion. J. Candrieu observed that the contents of the great and small intestines of the horse are generally mixed with a great quantity of liquid, which is absorbed in proportion as it flows along the intestinal canal; and on examining the venous blood of the small intestines, and the fluid collected from the chyliferous vessels, he found that the former had an odour sensibly herbaceous, and resembling that of the contents of the bowels, while the latter was entirely free from it.* Prof. Schultz made comparative experiments upon the blood of the horse, and found that the blood of the vena portæ differed very materially both from the arterial and venous blood in the same animal; the blood of the vena portæ was darker; it was not reddened by neutral salts, or exposure to the air, and very little by oxygen, and it coagulated less firmly than venous blood; the coagulum liquefied after 12 or 24 hours; it contained a less proportion of solid materials than either arterial or venous blood. The dried serum of the portal blood was of an ash-gray colour; that of venous blood yellow-gray; and that of arterial blood yellow; the dried cruor of portal blood was of a dirty gray-brown; that of venous blood dark red; that of arterial blood deep red. The solid constituent parts of portal blood contained, in general, nearly twice as much *fatty matter* as those of arterial and venous blood; more

* Andral. Morgagni.

* Magendie's Physiology, translated by Dr. Milligan, page 347.

especially the dry fibrine of portal blood, contained more than five times as much fatty matter as that of arterial blood.* These results prove, incontestably, either that new principles had been taken into the portal veins during the passage of the blood through the abdominal viscera, or that the original constituents had been converted in a manner quite different from that which occurs in other parts of the system; but their true import becomes obvious when we connect them with this further consideration. The blood returning from the whole body after having traversed the capillaries and undergone all the changes resulting from absorption and deposition in the tissues, does not necessarily pass through the liver in order to be prepared for its reception by the right cavities of the heart, its passage through the lungs, and its reconversion into arterial fluid. It is the blood returning from the abdominal viscera only, but more especially from the alimentary canal, with the fluids and soluble substances absorbed from the surface of the latter, which is necessarily transmitted through the liver and submitted to its action. Hence it may be inferred, that the function of the liver is not to purify the old materials of the body, as many physiologists have taught, but that the organ acts upon the new materials for the purpose of modifying or eliminating unnecessary and injurious principles, and for that of assimilating new principles for the nutrition of the body. And again, that substances taken into the digestive canal as ordinary articles of diet, and more especially those which are soluble in the fluid ingesta, are absorbed into the portal system, and conveyed, in the first place, to the liver, in order to have changes effected upon them before they are carried to the lungs for the purpose of being converted into arterial blood. It seems to be a gratuitous and careless assumption to limit intestinal absorption to water, or to water containing soluble poisonous substances, or substances incapable of assimilation. Yet venous absorption has been received in this limited point of view, and passed over as a non-important part of digestion in the first passages. It follows, rather, from the facts that I have quoted, and from a patient consideration of the whole subject, that digestion comprises not only the absorption of particles which serve for nutrition, and are conveyed by the chyliferous vessels and the thoracic duct to the right side of the heart, but the absorption of particles which seem also for nutrition, and are conveyed through the portal system and the inferior cava to the right cavities of the heart.

Many analogical arguments may be brought forward in support of this view of the case. That the liver is an organ of digestion, performing such an important part of the whole function as that which I have described, may be inferred from the fact, that in many of the lower animals the origin of the liver has been shown to be a protrusion, or diverticulum of the parietes of the intestinal canal. The volume of the portal veins, compared with that of the biliary ducts and gall-bladder, indicates that the contents of the former are destined for something more than the secretion of bile. The portal vascular system is a medium by which the pabulum of life is conveyed to the animal system throughout all its phases of existence; the vesicula umbicalis communicates with the mesentery in the embryo; the omphalo-mesenteric vein communicates with the mesenteric vein, which is the primary branch of the vena portæ in early fœtal life. A portion of the blood of the placenta reaches the heart through the portal system, in the more completely developed fœtus; and, according to the view taken in this paper, a part of the product of digestion is conveyed to the right side of the heart, through the liver, during the whole period of existence after birth. There is a strict analogy between the course of that portion of the nutritive materials which enters into the common reservoir, the right side of the heart, by the thoracic duct, and that portion which enters by the inferior cava; both are carried, in the first place, through organs which effect preliminary changes upon them; the former through the mesenteric glands, and the latter through the liver; both are mingled with the imperfect and deteriorated animal fluids returning from the extreme parts of the circulation: one with the lymph, the other with the blood; both portions enter into the venous system and are mixed with the venous blood; and as the chyle is modified as it passes through the mesenteric glands and along the thoracic duct, being more fibrinous, and having a redder tint as it approaches the heart, so the materials carried through the liver are also modified in their passage towards the heart, as we learn by the deposition of bile. The liver is no more an organ supplementary in its function to the function of the lungs, than the mesenteric glands are organs supplementary to the lungs; but the inference now drawn is corroborated by the fact, that poisonous and irritating substances, which, by their subtilty or otherwise, succeed in passing the portal system, are eliminated by the lungs, or the lungs failing to effect this elimination, we frequently find evidences of the great efforts which Nature has made to get rid of them in these organs, in order that the arterial blood may be transmitted pure to the left side of the heart for the purposes of life; one of the most constant post-mortem appearances after death from poison, particularly by mineral substances which have been detected in the

* Lancet, 1836, vol. i, p. 935.

blood of the portal system, as the preparations of mercury, arsenic, and copper, being congestion, inflammation, hepatisation, or gangrene of the lungs.

A clue is frequently obtained to the secret operations of Nature by watching her own aberrations; and we meet with a hint by which this part of the process of digestion might have been predicated in the occasional observation of chyle in the veins of the small intestines. The thoracic duct has also been found completely obstructed.

This view of digestion explains not only the rapid transmission of fluids from the stomach to the emunctories,—the skin and the kidneys,—but also the reason why diluting fluids are so essential to nutrition; we learn by it that hunger and thirst have the same final cause; and we see why substances which afford the most nutrition, so far as the formation of chyle goes, are incapable of affording nourishment to the body, when employed *alone*, for any length of time, as articles of diet.

A great number of facts might be elicited from the history of diseases in confirmation of this view of the process of digestion, and at the same time an opportunity is afforded by it for new investigations into the causes of morbid phenomena, which have hitherto baffled our inquiries. I may cite as instances, the source of the biliary calculi; the affections of the stomach which result from the obstruction, by any cause, of the biliary ducts, and from diseases of the liver; the occurrence of jaundice without any obstruction of the biliary ducts or any disease of the liver; the effects of the habitual use of alcoholic fluids upon the liver; the consequences of excess in the quantity, and errors in the quality, of our food upon the same organ; the diseased liver, and dropsy, of porter-drinkers; the frequent occurrence of hydatids, and the occasional occurrence of other entozoa in the liver. Frank cites the case of a child who died of small-pox, and whose liver contained a considerable number of worms, some living, some dead; they were lodged in the ramifications of the vena portæ, and in the hepatic veins; they differed from the *distoma hepaticum*, but the true *fluke* has been found in the branches of the vena portæ, and as many as fifty of them in the parenchyma of the liver, without ulceration or perforation.

The observations above made apply also to vicarious diseases of the liver and lungs; the fatty degeneration of the liver occurring in consumptive persons; diabetes; the lithic and phosphatic acid diatheses; gout, and a great number of maladies. With respect to the last, it is very well known to practitioners that assimilation is greatly modified; digestion, in its limited acceptation, is bad; the liver is deranged in its secreting function, and, no doubt, in its assimilating function, and the blood is unhealthy. It has never been shown that the chyle is unhealthy in this disease, and all the attendant phenomena render it much more probable that the fault arises in the abnormal condition of the stomach and liver, in consequence of which crude materials are received into the portal system and pass by the way of the venæ cavæ into the general circulation, without undergoing the necessary changes in the liver.

If I were asked to define what is the first object of Nature in the wonderful machinery of an animal body, I should answer, the formation of arterial blood. The process of chymification and absorption by the chyliferous vessels is for the supply of materials to form arterial blood. The absorption of liquids and soluble principles by the alimentary tunics is for the supply of materials to form arterial blood. The glandular apparatus of the mesentery, the liver,—with their minutely intricate and incomprehensible workmanship,—are for the preparation of materials for the formation of arterial blood. The product of digestion reaching the right side of the heart by both these channels is there blended and propelled forwards through the lungs for conversion into arterial blood.

The secretion of bile would appear to be a complementary function of the liver; yet the bile is a fluid of importance in digestion; whether it is an agent of chylification is yet uncertain; that it aids defecation there can be very little doubt. With respect to this secretion a *conjecture* has forced itself on my mind by observing the process of defecation in newly-born infants, and the alvine dejections in some cases of disease. I am inclined to think that every meal, and every species of food capable of perfect digestion, furnishes the elements of some of the principles of bile at the commencement of the process, which are conveyed by a kind of lesser circulation, somewhat resembling the smaller or pulmonary circulation, through the liver, to whose action it is submitted, in a circuit back again to the duodenum, for the completion of its own digestion and defecation.

A Treatise on the Structure, Economy, and Diseases of the Ear. By GEORGE PILCHER, Esq., &c. &c. London, 1838. Highley.

HAD the Council of the London Medical Society been a little more considerate in its demands when it selected "the structure, economy, and diseases of the ear," as the question for the Fothergillian medal of the year 1838, there can be but little doubt we should have had a more perfect production to deal with than the volume now before us. Our author, however, in common with

his less successful competitors, had no choice left him, either as regards time or extent of subject; and the manner in which he has acquitted himself, in all that pertains to the anatomy of the ear, makes us the more regret his having been thus compelled to enter, at least for the present, into the extensive field of its physiology and diseases. Indeed, in the introduction to his treatise, so fully does Mr. Pilcher feel the obligations which were imposed upon him, that he truly observes, "The subject proposed is very extensive, and will certainly require some powers of condensation to treat it fully within the space usually allotted to an essay," and here lies the great fault of the work. The Council of the London Medical Society could not but have been aware that of all the organs entering into the formation of the human body, that subservient to the sense of hearing has received more elucidation from the zeal of the anatomist than any other. It is now more than one hundred and fifty years ago since Du Verney published an admirable work on the subject, rich in minute anatomical detail, and illustrated with numerous well designed and well executed engravings; and from Du Verney's time to the present the labours of the most eminent anatomists have been bestowed upon the ear; so much so, that if the anatomy of any organ have arrived at a state which may be pronounced as perfect, that organ is the human ear.

No person can question, for a moment, the philanthropic object which the Council had in view when it selected the subject, or, rather, the subjects it did; doubtless it could have been none other but to rescue from the hands of the empiric the treatment of an organ which he has too long been allowed with impunity to meddle with; and to place it, in common with the other parts of the human frame, in the safer keeping of the educated and less presumptuous practitioner; for

"Fools rush in where angels fear to tread."

This end would have been much better attained had the Council confined the essay solely to the diseases of the ear, and not demanded, in addition, the "structure and economy" of the organ.

Mr. Pilcher's prize essay contains 324 pages, half of which number is occupied with the anatomy, physiology, and malformations of the ear. In his general observations and physiology of the organ our author is not so happy as in its descriptive anatomy. In discussing the "ratio of comparative utility" of the organs of sight and hearing in the higher classes of animals, "in which both organs are perfect," Mr. Pilcher observes:—

"While the animal of prey seeks his food rather through the assistance of his sight and smell than of his hearing, the timid victim has its ear ever upon the alert to catch the slightest sound of its approaching enemy; yet, in all instances, the palm of utility must be yielded to sight, by the operations of which the creature becomes acquainted with objects, not only at a greater distance, but also far more speedily and far more accurately."

This is not a fair comparison between the two organs of sight and hearing; it is a comparison between the combination of the two organs of sight and smell in one animal, the carniverous, with the single organ of hearing in the other, "the timid victim"; whereas, in the latter, the organ of sight, as well as of hearing, is rendered, from position, equally subservient to its protection; and when in actual danger, from the pursuit of its enemies, it is through its visual organs it effects its escape. Thus, while a perfect combination of sight and smell is essential to animals which seek their prey, a no less perfect combination of sight and hearing is essential to the timid victim, to enable it to avoid the dangers which surround it; and in neither of these cases is there any proof afforded of the superiority of one sense over the other, but a beautiful illustration of the combined action of two senses in both animals for very different ends.

Mr. Pilcher further observes that "the more extensive vision in the animal creation, as compared with audition, is a proof of its greater utility"; but in order, like a scientific general, to secure his retreat, he shortly after states, "that it is not to be received as a general conclusion that the greater importance of a function the more universal will be its organ, for the reverse is particularly the fact in those of animal life." Now, we take the very reverse view of this, and conceive that, speaking in the most general terms, or even special terms, the greater the importance of a function the more universal will be the organ of that function. Our author admits that, first, feeling, and, secondly, smelling, are more generally present in the animal series, and if so, there

can be but little doubt that the organ, whether skin or mucous membrane, in any of these creatures, is in as full perfection for their economy as the eye of the eagle, or the ear of the hind; and, moreover, that the sense of touch, "the lowest faculty of sense," as Mr. Pilcher terms it, is not only the most universal, but in man himself is the most important of all his senses. Much, therefore, as we agree with our author in the importance which he attaches to hearing and vision, yet, notwithstanding "the all-delighting and rapid—and delighting because rapid—interchange of thought by the means of conversation; of the all-pleasing, all-exhilarating, all-soothing influence of musical concord," or without our author, of all the happiness we experience from sight, we would gladly lose the one or the other, or perhaps both, than encounter the miseries which would be entailed upon us from the loss of the "low faculty" of touch.

In speaking of the motions of the external ear, Mr. Pilcher considers that they "are nearly lost to the civilised being, from the same causes that have interfered with the development of the intrinsic muscles," viz., "the mode of dress, and acute listening to distant sounds not being so frequently necessary to the civilised being." Now, if this be the case, how happens it that, according to Mr. Pilcher, "they," the muscles, "are, indeed, hardly more developed in uncivilised tribes, being, under all circumstances, merely rudimentary." Our author also thinks that civilisation has a wonderful effect in modifying even the shape of the auricle:—

"The exact shape and form of the auricle vary in individuals almost as much as those of the more prominent features, and it is interesting to notice that its variations extend to whole nations, and that in proportion to the advance of civilisation, it has been observed to be smaller, more compact, and oval, assuming the appearance to which the idea of beauty is attached," &c.

Now, although we do not mean to contend for a moment that as much variety in the auricle of the ear exists as in the development and shape of the cartilages of the nose, yet we cannot imagine how civilisation can in any way affect the one or the other. We have had opportunities of observing as oval and as compact an auricle in the African as in the European, and it does not require our pen to call to mind the uncouthly appearances this auricular appendage presents in the ball-room of the most civilised dame of fashion amongst us. We cannot but agree with Kramer, who, with our author, dismisses the exaggerated opinions of Itard and Buchanan, that "the acute hearing met with among savage nations depends on circumstances far different from such purely mechanical ones as these."

The portion of the essay which is devoted to the consideration of the diseases of the ear is a running commentary on Kramer's admirable work, a collection of cases supplied by friends to the essayist, and the experience of the author himself on the subject. At some future time, we hope sincerely, that Mr. Pilcher will be in a position to give to the world a more extended account of his own experience in the treatment of the diseases of this interesting organ; a task for the proper execution of which he has laid the best foundation.

The Twenty-fifth Annual Report of the Glasgow Royal Lunatic Asylum. 1838.

The following are the principal results of the treatment in the Glasgow Asylum:—

"ADMISSIONS.

	Males.	Females.	Total.
In the Asylum, January 1st, 1838	74	72	146
Admitted since	58	59	117
Readmitted, having relapsed	—	—	—
	132	131	263

"DISMISSIONS.

	Males.	Females.	Total.
Cured	27	23	50
Relieved	13	11	24
By desire	3	5	8
Unfit	1	8	9
Died	8	7	15
	52	54	106
Remaining	80	77	157
Total	132	131	263

"Daily average number of patients during the year—Males, 78½; Females, 74½; total, 153.

"Of the patients whose treatment has, in the course of the year, been concluded by dismission or death, the cured amount to 47 per cent.; the dismissed uncured to 38 per cent., and the dead to 14 per cent."

A disposition to commit suicide exists in a great number of lunatics; and though these unfortunate beings frequently succeed in their attempts at self-destruction it is re-

markable that the circumstances of their deaths are rarely investigated. It is evident that by the omission a certain impunity is given to the proprietors and keepers of asylums, and that the result is anything but advantageous to the unfortunate inmates of these private prisons.

At the Glasgow Asylum the suicidal propensity existed in no fewer than 29 cases: namely, 12 males and 17 females. In some the propensity was so strong as to demand the most watchful care both day and night; and, as the Report states, this vigilance was attended with success. No suicide was committed. If the truth were revealed with respect to some other asylums, it would prove far less satisfactory.

The Report goes on to state some curious facts, from which it appears that lunatics may be *allowed to die*.

"Of the various means whereby suicide is attempted by the insane, that of starvation is often persevered in with the greatest obstinacy, and in no fewer than seven cases, in which the patients, on various grounds, utterly refused to take any food, we were obliged to have recourse to compulsory feeding. But, by means of the apparatus which we employ, the operation of feeding is effectually performed with great ease, and without any of that irritating and exhausting struggle, or painful interruption to respiration, which other modes of feeding unavoidably occasion. It was remarkable that no fewer than six or these seven patients were females, probably because the principle of imitation operates more powerfully with them than with males; and, whensoever the feeding apparatus is in any case employed, the use and object of it are unavoidably known throughout the ward to all the other patients who are capable of any degree of rational reflection. In one case the operation had to be performed twice daily, and sometimes oftener (for the exhibition of wine and medicine, as well as of food), during the long period of six weeks: in others, from a few days to two or three weeks! Some were speedily convinced of the folly of resistance, and resumed in the course of a day or two, the natural use of their powers of swallowing."

The rate of payment in this institution is moderate. On the 22nd of January the rate of payment for paupers was reduced from 7*s.* to 6*s.* 6*d.* per week; and in April the first rate of board was reduced from 8*s.* 6*d.* to 8*s.* a week, in this Asylum.

"The number of patients who died, and the denomination of the diseases which proved fatal, were as follows, viz.:—

Abscess	2
Apoplexy	3
Bruises and sores	2
Bronchial inflammation	1
Chronic bowel complaint	2
Consumption of lungs	1
Exhaustion	2
Scarlet fever	1
Water in the chest	1
Total	15"

The following practical remark deserves the attention of visitors:—

"The abolition of coercion is too often compensated by concealed severity. When we hear a vulgar and uneducated keeper boasting that, by a glance of his eye, or the turn of his finger, he can control a whole ward of the insane, we can guess pretty well how this seemingly mysterious power was acquired; and it would be well if those who visit madhouses would carefully study the countenances of the lunatics when the keeper approaches, and when he turns his back to the patient. An attentive observer might thus sometimes discover a strong and instructive contrast between the subdued and counterfeited expression in the one case, and the suspicious and revengeful scowl in the other."

When Mr. Galbraith recently tendered his resignation of the office of Superintendent of the Asylum, the Directors advertised for a successor. *Sixty* candidates offered themselves for the situation. The Directors, after repeated and careful consideration of the comparative qualifications of the candidates, elected Dr. W. Hutcheson, of Edinburgh, to the office. It is not often that the directors of public institutions are so happy in their choice.

We have received Reports of the Hanwell Asylum, and the Asylum of the West Riding of York, to which we shall probably revert. In the Middlesex Asylum there are some remarkable peculiarities, to which public attention must be directed.

WESTMINSTER MEDICAL SOCIETY.

Saturday, February 2, 1839.

Dr. Crowne, President.

CASE OF CROUP OCCURRING WITHOUT THE USUAL SYMPTOMS OF THE DISEASE BEING PRESENT, AND DURING SALIVATION.—CAUSES AND TREATMENT OF CROUP.

Mr. —— related the following case of croup, as differing in many respects from ordinary cases of the disease. The patient, a tall delicate girl, with a narrow chest,

twelve years of age, had been indisposed a fortnight when he was first called to see her. The symptoms presented were as follows:—There was tumefaction and severe pain of the wrists, elbows, knees, and ankles; she suffered from cough, and pain at the epigastrium; respiration was clear, but there was slight bruit de cuir, unaccompanied with pain, in various parts of the thorax; the tongue was red at the tip and edges, white in the middle, and moist; the bowels confined; pulse small. Eight leeches were applied to the chest; calomel and opium in small doses, and colchicum, were administered internally, and a liniment applied to the swollen parts. On the third day she was improved; the pain and swelling of the joints had disappeared; the tongue was clean, and the bowels open; the heart, however, beat violently, and the pulse was quick, but of moderate strength. A blister was applied over the region of the heart, and the medicines continued. On the fifth day all the symptoms were relieved, and she merely complained of weakness. The medicines were continued. Sixth day: improved in strength; the mouth being affected, the calomel and opium were discontinued, and colchicum and Dover's powder administered. Seventh day: mouth more affected than yesterday, but she is otherwise better. Continue the colchicum, and use a gargle to the mouth. Twelfth day: has been much the same since last report; for the last two days has omitted all medicine. To-day she had a relapse. On visiting her, the narrator found her complaining of a hacking cough (which did not, however, occur in his presence), and a pain at her chest. Auscultation gave the same results as before, with the exception of a slight puerility on inspiration; the pulse was thready and slow, and the general debility seemed to counter-indicate the necessity of abstracting blood. A blister was applied over the chest, and a pectoral mixture, and a Dover's powder at night, were prescribed. During the night she was very restless, the cough was troublesome, and she complained of tightness at the chest. Thirteenth day: the pulse increased in strength, and the pain moved to the throat, with a sensation of something occasionally rising. A good deal of blood was abstracted by the application of leeches to the larynx; some tartarised antimony was added to the mixture, which caused frequent sickness, and she vomited up a substance which her mother said resembled pieces of flesh. The following night was even worse than the last, the patient frequently starting up and complaining of the difficulty of breathing. On the following morning, the fourteenth day of her illness, the pulse was stronger and fuller, the countenance, as before, pale, the voice soft and low. There had been no expectoration since the night. The patient complained of a sensation as if something were rising in her throat, but on examining the pharynx carefully, it was found to be perfectly healthy. Deglutition was perfectly free, and the appetite ravenous. Leeches were again applied to the larynx; tartar emetic mixture, and calomel and opium were administered. The submaxillary glands were swollen, and painful when pressed. On inquiry of the attendants the narrator was informed that neither during the paroxysms, nor at any other time, had the patient made any particular noise in breathing. The next morning the child died, no other similar matter to that mentioned above being vomited up. On examining the body the following day, the pharynx was found pale and natural; there were no signs of disease until they reached the internal parietes of the epiglottis. This, though quite pale on its external surface, presented on its free margin a deep crimson line, and on its internal surface a layer of fibrine, which was continued down to the trachea and the lesser ramifications of the bronchial tubes. This membrane formed a perfect tube, was of a pale buff colour, here and there spotted with gray, and had internally a quantity of thin straw-coloured fluid, about the consistence of milk. On dividing this membrane it was found to be separated from another by a layer of thin gray mucus, and upon lifting up the second membrane, the mucous surface of the trachea, of a bright scarlet colour, was exposed. The lungs were healthy; the pleuræ, however, were covered with old adhesions; the heart was adherent to the pericardium at its anterior part by a recently-formed secretion, of a flesh-colour, and injected with small vessels. The circumstances having a tendency to mask the real nature of the complaint were, first, the age, the patient being nearly twelve years old, which was certainly a more advanced period than was usual for children to be affected with croup, although, as was well known, not unprecedented, as epidemics had raged in which adults were subjected to its influence. The second, and more remarkable circumstance, was the fact of the disease occurring whilst the patient was under the influence of calomel; and the third was the absence of the characteristic sound during inspiration. The narrator would ask, whether the case related was to be considered as one of metastasis of an inflammatory action from a serous to a mucous surface, or whether it was to be looked upon as comprising two distinct diseases, one following and being perfectly distinct from the other. The former was the view he himself took, as the cause and effect in both were analogous, the *seat* of the disease only differing. In both we had inflammation, followed by an effusion of fibrine. He would also inquire, whether the false membrane was the result of a specific affection,

or whether it was only due to an intense local inflammation. He was inclined to this latter opinion, not only from this case, but from what might be gleaned from writers on the subject. Thus Jurine, who contends for a specific affection, admits that is of the same nature as bronchial catarrh, and that it is but the last of a series of tracheal and laryngeal affections, only surpassing them in intensity. He thus completely knocks down his own argument. Albers argued in favour of the non-specific nature of the complaint, and proved by many interesting experiments on different animals, that the membranous secretion might be produced by local irritation. How were we to account for the different layers of fibrine and their separation, as observed in the present case? That during the secretory stage of the disease the mucous membrane was not permanently in a state which enabled it to effect that secretion of fibrine, might be inferred from the existence of clear gray mucus between the false membranes, as was seen in the preparation when fresh, and which enabled them to be separated with such facility. Now, if the layers corresponded to the evening exacerbations, would not the proper time be pointed out for depletion, or the employment of other antiphlogistic means, in order to prevent the return of an increase of circulation, and thereby prevent the secretion of lymph, and by these means anticipate the cause of death in many instances. The narrator concluded by reading the following short extracts from Albers' "Prize Treatise on Croup" (1809), which show that such cases were not unknown to him; he names them asthenica, in contradistinction to the other form, which he denominates sthenic.—"When, on the contrary, the catarrhal symptoms precede the invasion, which happens most frequently, the development of the disease takes place gradually, and often in *an insidious manner*." In another place he says, "In some patients the fever shows itself evidently with the characters of synocha; in others these characters are hardly sensible, and the febrile action appears so mild, and so slight, that many physicians refuse to rank it among inflammatory fevers."

In answer to some questions, Mr. —— stated that the voice of the patient was always low, not much above a whisper. The respiration was also very slow, and there appeared to be no physical obstruction to the breath. The peculiar brassy sound on inspiration, characteristic of croup, had never been present.

Dr. ADDISON thought the excessive debility of the patient might serve to explain the absence of the prominent signs of croup, the efforts of respiration being so slight as not to interfere with the action of the glottis. It was still, however, difficult to conceive how the symptoms could have existed without the suspicion of mischief, especially in the early stages of the disease.

Dr. C. J. WILLIAMS said that the case was clearly one of that kind of croup, not very uncommon, in which there is a false membrane throughout the entire course of the air-passages, and this was the class of cases in which the chief symptoms of croup were the least marked, owing to the great obstruction to respiration which existed. Regarding the question as to whether the inflammation of croup was specific, or merely differed in intensity from common inflammation, he was inclined to the latter opinion; he had long believed that croup depended upon the extension of the inflammation beyond the mucous membrane; and he thought many circumstances proved this opinion to be correct. Thus, the swelling and soreness on pressure externally were greater than in cases where the mucous membrane only was inflamed. The products of the inflammation in croup were also similar to those observed in other cases of inflammation of the cellular tissue. Mucous membranes were constantly inflamed without lymph being secreted, and when this did occur, it was in consequence of the inflammation spreading to the submucous cellular tissue. The age at which croup occurred also favoured the opinion he had advanced; the thinness and less developed structure of the mucous membrane of the trachea in young persons, would explain why catarrhal inflammation was conveyed more readily to the cellular tissue in them than in older persons, and also why the lymph effused was so much more readily thrown out. Regarding the age of the child, in the case in question, it was by no means remarkable; Cheyne had said that croup might occur at any time before puberty. The changes the larynx undergoes at this period, becoming, as it does, suddenly increased one-third in diameter, afforded a security against the complaint. He had seen a case of croup in a child nine years of age, in whom the symptoms were subdued by the rapid influence of mercury; a relapse, however, occurred during the salivation, and the patient died. The cases were instructive, as showing that ptyalism did not render the patient secure from a relapse; and that antiphlogistic treatment might become a second time necessary. The use of calomel, followed by tartar emetic, was the plan he chiefly relied upon.

Dr. REID related the case of a lady, thirty years of age, who had been labouring under difficulty of breathing and other urgent symptoms, which had been treated as phthisis. She recovered after expectorating complete casts of the lesser bronchial tubes.

Mr. RODERICK had found, in cases where difficulty of breathing was constant, that the epiglottis was affected; when the disease was lower down, the above symptom was intermittent.

Mr. Costello recollected a case in which a hackney-coachman, under the influence of mercury for a sore throat, considered to be venereal, got wet through one night on his box, and became affected with inflammation of the throat, attended with much swelling. The surgeon in attendance, thinking the tumour consisted of a collection of matter, plunged his knife into it, but no discharge took place, except that of blood which flowed profusely; the symptoms were, however, unabated. This man one night jumped out of window, and was killed. There was a false membrane throughout the entire course of the trachea. This case resembled the one first related in many points. The voice of the patient had never been indicative of the presence of croup; he had suffered from rheumatism, and was from twenty-five to twenty-eight years of age, the period at which croup rarely occurred. He was also under the influence of mercury.

Dr. Addison could not agree with Dr. Williams that the submucous cellular tissue was affected in croup. If it were affected, the product of the inflammation could not pass through the mucous membrane, but would be found in the cellular tissue. He thought that the inflammation of croup had something peculiar in it, and that the treatment of it as *intense* inflammation had, in many cases, been detrimental. In his treatment of the disease he was guided by the age and constitutional symptoms present.

Mr. Streeter, in the treatment of croup, had been disappointed in finding that active measures which were of avail in some instances, in others seemed rather to have been productive of evil. He believed that in some cases of croup intensity of inflammation led to the deposit of the false membrane, whilst, in other instances, this arose from some peculiarity in the disease, which we did not at all understand.

Mr. Snow had seen a case of croup, ending fatally, in a young woman after the age of puberty. She was not examined after death, but false membrane was coughed up, bearing the impression of the larynx. He thought, notwithstanding the remarks of Dr. Addison, that the suggestion of Dr. Williams (who had left the Society) might be correct, and that the lymph might pass through the mucous membrane from the cellular tissue beneath. Physiologists had failed to discover vessels in serous membranes; yet, in inflammation, lymph was found on the surface, which, consequently, must pass through from the vessels beneath, and the secretions from all the glands of the body had to pass through the membranous coats of the ultimate divisions of the ducts of the glands.

During the discussion, some observations were made by various members on laryngismus stridulus.—Dr. Williams said there might or might not be pressure upon the recurrent nerve; the peculiar sounds of the voice observed in this disease resembled those of croup; and depended in both cases upon the spasmodic action of the muscles of the glottis.—Dr. Addison said laryngismus stridulus was merely a functional disease.—Mr. Snow agreed that the disease was functional, and that the exciting causes probably existed either in the gums or bowels.

MEDICAL SOCIETY OF LONDON.

Monday, February 4th, 1839.

Mr. Bryant, President.

NEURALGIA.—SPINAL DISEASE AND ITS COMPLICATIONS.—ANOMALOUS CASES.—REMARKABLE EFFECTS OF FRIGHT.

Mr. Dendy, in answer to a question, stated that the lady whose case he had related at the last meeting, continued without medicine for two or three days, at the end of which period, as she was in *statu quo*, he gave her six grains of the compound extract of colocynth, which acted copiously, and diminished the volume and strength of the pulse. He followed up this treatment by tonics and stimulants. He gave eight-grain doses of the sulphate of quinine three times a day, but this produced headach, and did not appear to afford much relief; he, however, continued the medicines, as remedies occasionally produced the symptoms which they were intended to relieve. He increased the quinine to ten-grain doses, and continued it four days. She was that day in apparent good health and spirits, but the pain in the head was undiminished. On examining the spine he found the fifth dorsal vertebra tender, and applied two mustard plasters over the part, by which erythema was produced, but no beneficial effect followed. Touching the portio dura of this patient produces a shock throughout the system, proving the disease to be general and not local. Three nights since she slept for an hour, and on the following night for two hours.

Dr. T. Thomson inquired whether there were any gouty or rheumatic symptoms in the case; these were known to exist frequently as modifications of hysteria; perhaps, in the present instance, they might modify the neuralgia.

Mr. Headland thought that in neuralgia we could not lay down general rules regarding the beneficial results of any particular medicine. Quinine, however, would do good in cases in which there was a decided intermission. Iron was useful when an asthenic state of the system accompanied the affection, and belladonna he thought only useful in those cases of neuralgia in which there was an eruption on the skin, an erythema, during the paroxysm. Aconi-

tine and other narcotics only afforded a temporary relief in neuralgic affections. He considered all the knowledge we had on the subject of neuralgia amounted to little more than this. Regarding examination of the spinal column in anomalous and other cases, he thought there was too much attention paid to this region by many practitioners. Tenderness of the spine existed in almost all delicate females, in whom there were no collateral symptoms of disease; its presence was, therefore, no proof of the cause of many affections which did exist. The spinal column was made the source of many diseases by individuals who wished to place their names before the public. He had a case of obstinate neuralgia under his care, which, for four or five months, resisted every species of treatment. On one occasion, during the progress of the case, a practitioner in consultation believed he had found out the source of the affection, by discovering tenderness over one of the dorsal vertebra; remedies were applied to this symptom, but without any effect. The disease eventually wore itself out. Had a relief of the symptoms taken place simultaneously with the treatment of the spinal affection, it would have established a false inference as to the cause of the disease. The spinal column was rendered as prominent by some practitioners as was the stethoscope by a physician, now no more, who rode through the streets with the instrument on his knee like a marshal's baton; the examination by the stethoscope no doubt acted as a charm in some cases.

Mr. CLIFTON believed that Mr. Dendy's case might be treated advantageously by the preparations of iron and the external use of belladonna, in the form of an ointment, to the affected part; he had found this treatment beneficial in similar cases. Regarding the application of counter-irritants to the spine, he had never seen them of service, unless local depletion had been premised.

Mr. DENDY had originally treated his case as rheumatic with no benefit. He had applied leeches on various occasions, followed by blisters behind the ear, at the nape of the neck, and other neighbouring parts, without relief to the pain. Belladonna over the eyebrows, continued for many hours, for three successive days, was of no benefit. He was now convinced that nothing but change would afford her relief.

Mr. PILCHER, recollecting the important functions of the spinal column, particularly of that portion within the cranium, could not agree that too much attention was paid to it, although he was ready to admit that on many occasions it had been a source of profit to empirics. There were many diseases which might not originate in this region, but which would, in course of time, implicate it, and would require treatment to be applied to the part. Regarding tenderness of the spine, it was not to be wondered at that young ladies should experience this symptom when pressed in some particular part of the vertebral column, inasmuch as not one in a hundred was perfectly straight, owing to the present vicious system of physical education. He recollected a case in which palpitation of the heart existed to a remarkable extent, as a symptom of posterior curvature of the spinal column, the pressure being exerted at that part connected with the ganglia supplying the heart. Instead of the spinal column being too frequently examined, he believed it was not paid sufficient attention to.

Dr. THOMSON agreed in the observations of Mr. Pilcher. Perhaps he had not explained clearly what he considered the cause of the vomiting in the case he had related. He believed that the brain was first affected, and then the spinal column, and that the sickness was thus produced. Rostan had related an interesting case, in which a young woman, previously in good health, was much alarmed in consequence of the town she lived in being ransacked by soldiers, and died suddenly from fright. The spinal marrow was found to be softened. In this case the first impression must have been made upon the brain, but the injury was fixed upon the spinal chord. He thought Mr. Headland, in wishing to prevent extremes in others, had himself fallen into the same error; and in asserting that, because tenderness of the spine was a constant symptom in delicate females, it was no reason why this symptom, in many cases, might not be one of much importance. Indeed, he (Dr. T.) believed that this tenderness could not exist unless the patient was more or less out of health. Congestion of the spinal column, however, did not always imply that depletion was necessary; on the contrary, stimulation might be necessary in some cases in which the local congestion might depend upon a deficient quantity of blood in the general circulation.

Mr. HEADLAND explained, that the arguments brought against his views did not affect them; and he still contended that it was an evil to endeavour to localise disease at the expense of overlooking the general symptoms.

Mr. CRISP considered the spinal column, instead of being sufficiently attended to in diseases, was, in fact, shamefully neglected. In his visits and studies at the hospitals in London and Paris, he had only had the opportunity of seeing four spinal chords examined, and it was well known how rarely this region came under observation after death in private practice. He had lately attended a case with Dr. M. Hall, in which a lady, forty years of age, previously in health, except that for two months she had no power over her lower extremities, after lying a short time in the recumbent position,

was affected by excruciating pain in the legs and loss of muscular power. On examining the spine, the second and third dorsal vertebræ were found tender; local depletion was resorted to, the pain soon abated, and she was now merely devoid of sensation in her lower extremities, there being plenty of muscular power in them. The spine was still tender. She is neither hysterical, nor nervous, and he believed that had the case not been treated in reference to the spinal affection, the disease would have gone on to organic lesion.

THE LANCET.

London, Saturday, February 9, 1839.

The motives which led the Editor of this Journal, in 1830, to become a candidate for the office of Coroner, induced him to take the same step on the declaration of the present vacancy in Middlesex. Since the former contest events have occurred which, if he had exclusively consulted his own convenience, would have recommended an opposite resolution, although his feelings in favour of the principle he then asserted have been strengthened rather than weakened. Previous to 1830, any person of the least reflection must have perceived that a knowledge of medical science was indispensable in a Coroner, and that in obscure cases—such as that officer is called upon to investigate—the inquest into the cause of death can only be conducted by a medical man. But no one undertook to urge this fact upon the public mind, in a distinct and tangible form, until he, at great expense and great sacrifices of every kind, appealed to the freeholders of Middlesex, and undertook to establish the superiority of Medical over Attorney Coroners. There are now more than twenty Medical Coroners in England, and many of them have been appointed since 1830; so that the question, although not then absolutely carried in Middlesex, was not agitated in vain.

The British Medical Association adjured him, in the name of the profession, to come forward a second time, under circumstances which admitted of no refusal; they were convinced, with every rational person of every party, that Middlesex should have a Medical Coroner, and were pleased to point him out as a fit candidate for the office, and an adequate champion of the cause which they espoused. In responding to the call of his brethren, he most emphatically declared, that if any other medical candidate offered himself—of any party in the profession—he would not say better qualified for the office, but better known to the freeholders of Middlesex, and more likely to secure the triumph of the right cause, he would retire and zealously support that candidate.

Only one political principle is involved in the office of Coroner. The electors have to appoint a public officer to a responsible situation. The Coroner, with the aid of all the light that can be derived from the science of medical jurisprudence, has to direct the jury in determining the cause of death; if he allow himself to be biassed upon any occasion by political feeling, he commits a base outrage upon justice, and does irreparable wrong to society. He cannot ask whether the deceased, or the suspected criminal, be a Tory, a Whig, or a Radical; he must forget these distinctions; and should not the freeholders, in selecting the Coroner, and discharging their duty to society, set him the example of conscientious impartiality? Should they ask whether the candidate holds this or that political creed? Should they not solely ask, Is he qualified for the office? Is he competent to the discharge of the sacred functions entrusted to him? He who attempted to divert the attention of the electors from this simple question, and to rouse their political prejudices, would betray the emptiness of his pretensions, and merit public execration. Success would be ignominy, for he would be carried into the office by political partisanship; and his career would be tainted at its very source. The medical candidate should therefore, in all cases, repudiate such a disreputable course.

We need employ no arguments to convince our medical readers of the present disgraceful state of the Coroner's Court, or of the necessary incapacity of the Attorney Coroners. The verdicts, in the majority of cases, are utterly absurd, and lead the medical jurists of Germany and France to suppose that forensic medicine in England is in a state of barbarism. The Attorney Coroners expose the English nation, and English practitioners, to the ridicule and pity of all enlightened foreigners; and this ridicule and pity are as widely disseminated as the English newspapers, by which the decisions are carried to the four quarters of the world. Such verdicts can evidently be returned only under the direction of Coroners who remain unacquainted with the laws which regulate the continuance and cessation of human life,—of men entirely unacquainted with the progress of medical science from the time, in the first centuries, when the Coroner's Court was founded by the unenlightened Saxons. The true causes of death can never be returned by juries until there are Medical Coroners all over the kingdom.

The whole design of the contest in Middlesex is to convince the public that attorneys are necessarily unqualified by education for the office of Coroner,—to demonstrate that in that knowledge upon which the efficiency of the office turns, the attorney is entirely unfurnished. Than this fact nothing is clearer. One of the collateral duties of the Coroner is "to inquire of "wrecks, and of *royal fishes*, as sturgeons, "whales, and the like;"* now, we would ask sensible people whether attorneys in town or country—by river or sea-coast—ever study zoology or comparative anatomy?—whether there is a class of men in the empire less capable of distinguishing a *royal fish*, than your attorneys?—and whether, if they begin their zoology, and carry it as far as an oyster, or a turtle's fin, they ever attain that slight proficiency which is requisite to distinguish a sturgeon from a shark, a whale from a walrus? The answer must be negative. If we referred to the several other subordinate duties of the Coroner, the same negative response would be extorted; so we take the attorney candidate at once from the whales and *royal fishes*, to the most important, the peculiar and solemn duty in the office to which he presumptuously aspires. It is the duty of the Coroner to summon the jury, and proceed immediately, without delay, to the view of the killed, wounded, drowned, or suddenly dead—*statim et sine morâ accedere ad occisos, vulneratos, submersos, vel subito mortuos:* to see whether "the bodies have been drowned, or slain, or "strangled, by the sign of the cord tied "streit about their necks, or about any of "their members, or upon any *other hurt* "*found upon their bodies*;*—to view all "wounds, the length, the breadth, and deep-"ness, and in what *part of the body the wound* "*or hurt is.*"

We ask; what does the Attorney Coroner, in the presence of a dead body, know of anatomy, *or of the parts of the body?* What of the effects of wounds or of poisons upon that part of the body called the stomach? The jury must view the body; they must be sworn *super visum corporis*, in order, as a learned authority states, "that "the jury may have the benefit of the Coro-"ner's remarks upon the appearances which "the body exhibits." But is the attorney prepared, by his profession, to comment upon the morbid appearances, and to judge of their bearings upon the causes of death? Nay, is he not less likely to guide the jury right in a question of this nature than any attentive mechanic who has attended the ordinary lectures at a Mechanics' Institution? Who knows less of general science than the would-be Attorney Coroner? Who is less qualified to direct the opinions of a jury in cases of momentous interest and of sudden emergency in medical cases?

In establishing the principle that attorneys are entirely destitute of the requisite

* S. P. c. 51; Bract. 120.

* 4 Ed. 1. De Officio Coronatoris.

qualifications for the office of Coroner, it is not pretended that they are unfit for other departments of the public service. No profession, no class of men in the country, get so much money from the public purse as the lawyers. We say nothing here of barristers; but from under-sheriffs to clerks of the peace, and town clerks, and clerks of guardians, and superintendant registrars, there is no public office of any emolument into which the attorney has not insinuated his slippery nature. No, not one; and hitherto the attorney has excluded the medical man and himself usurped the office of Coroner, for which, in the present state of medical jurisprudence, he is infinitely less qualified than a surgeon for the place of under-sheriff.

In contests carried on upon any public principle personalities will be avoided by a high-minded candidate; and no one can feel more averse than ourselves to any general reflection cast upon any large body of men. But the Coroner is a Judge; and the question of moral qualification must exercise no slight influence upon the electors. We shall therefore quote a sketch by JEREMY BENTHAM, touching the moral peculiarities and fitness of attorney candidates; the severity of which, it must be admitted, nothing could excuse but extreme accuracy.

After a profound study of their character this great jurist says of the legal profession:—"If there is a profession which pre-
"pares men to do evil, and to avoid punish-
"ment, it is this. If there is a profession
"which, from a habit wrought by gain, and
"acquired in supporting truth or falsehood
"indifferently, effaces all sincerity, all love
"of truth from the soul, it is this. If there
"is a profession that teaches a man, by the
"constant practice of his life, to sell his
"faculties to the highest bidder, to say all,
"to accuse of all, to defend from all, for
"money; to let himself out, soul and body,
"to him who pays best; and, consequently,
"to be always ready to sacrifice for the
"least advantage the interests of the great-
"est number, it is the trade of the lawyer.

It is grateful to remark that there are numerous splendid exceptions to this observation; several deviations from this definition of the species by this great naturalist,—even amongst the Attorney Coroners,—but the incontrovertible fact remains, that Medical Coroners should everywhere be substituted for inefficient attorneys. This consummation must ultimately crown the success of the contest in Middlesex.

DISCOVERIES OF SIR A. COOPER.

LETTER FROM P. CRAMPTON, ESQ.

To the Editor of THE LANCET.

SIR:—If the wealth of an individual could afford an excuse for withholding from him any portion of his property, I might stand excused for delaying to restore to Sir Astley Cooper a portion of his fame as a discoverer, of which, by a misprint in the report of a lecture lately delivered by me in the Royal College of Surgeons in Dublin, I have most unintentionally deprived him. In the report which appeared in many of the newspapers, and in the "Dublin Medical Journal" for the present month, I am represented as having said, that "if we are not indebted to Sir Astley Cooper for the discovery of the true anatomy of the parts concerned in hernia (as if we could be indebted to him for the *untrue* anatomy), he is entitled to all the honour of the discovery, for he was the first to apply knowledge which was of no account, until he used it in explaining the nature and treatment of strangulated hernia." The passage should be read thus—"I will not say that we are indebted to Sir Astley Cooper for the discovery of *the whole* of the true anatomy of the parts concerned in hernia, but I can say, with perfect truth, that he is entitled to the whole honour of the discovery for knowledge, &c." But this is insufficient justice. The fact is, that I had intended to particularise the additions which had been made by Sir Astley Cooper and others to the pathology of hernia, a duty that was the more necessary in the instance of Sir Astley, as he has not, in his great work, put forward his claims as a discoverer, but merely permitted them to be inferred. I should (for example) have mentioned his discovery of the "true anatomy" of the upper abdominal ring, and of the inguinal canal, the fascia transversalis, and the double sac of femoral hernia. Upon these points, as well as upon the anatomy of the thymus gland, I had full notes prepared; but finding that I had much exceeded the limits within which I had intended to confine my lecture, I was obliged not only to

compress what I had to say towards the conclusion of the discourse within the smallest possible compass, but even to omit, altogether, much that should have found a place in a lecture purporting to give an outline of the history of the progress of medicine *in connection with anatomical discovery*. This *limited* view of the subject furnishes the only excuse I have to offer for the many omissions in the discourse, which must strike the most careless reader. Among these I may note vaccination, the treatment of inflammation by mercury, and the discovery of the medical properties of iodine.

With many apologies for this unreasonable trespass on the columns of your valuable Journal, I have the honour to be, Sir, your very faithful, humble servant,

PHILIP CRAMPTON.

Merrion-square, Dublin,
Jan. 29, 1839.

CONDUCT OF GUARDIANS AT THE LUDLOW UNION.

To the Editor of THE LANCET.

SIR:—I think it right to forward you the following correspondence, which took place subsequent to the transaction relating to the Board of Guardians, which is inserted in THE LANCET of the 19th January.

I trust that the publicity given to the proceedings of irresponsible bodies, particularly where the helpless poor are the sufferers, will have the effect of eliciting some degree of liberality and humanity when they are wanting; and in the present instance I appeal to any one at all conversant with the ordinary affairs of life if two shillings a week be sufficient to support the recovery of a labouring man from a state of debility from fever to a state of health. I remain, Sir, your obedient servant,

HENRY MEYMOTT.

Ludlow, Jan. 25, 1839.

To the Chairman of the Board of Guardians, Ludlow Union.

Mill-street, Ludlow, Jan. 12, 1839.

SIR:—I beg leave to acknowledge the receipt of the unanimous condemnation of my conduct, by the Board of Guardians, for making use of the power of ordering extra diet, which power I considered I was entrusted with, from my having been supplied with printed forms headed "Medical Order for Extra Diet."

I beg further to state that this condemnation was handed to me from the Board in an open manner, written on the back of one of my orders.

I have to request the Board to inform me whether *for the future* I am to be entrusted with this power; for I do not consider a flat contradiction to my opinion a sufficient reason for condemning the exercise of a power entrusted to me by the Board. I am, Sir, your obedient servant,

HENRY MEYMOTT.

Robert Thomas, Clerk to the Guardians, Ludlow.

Ludlow Union Office, Jan. 16, 1839.

SIR:—I am directed by the Board of Guardians to inform you that the order countermanding a previous one issued by you for James Morgan to have mutton, was given in error, his name having been overlooked in your medical weekly return; and it having been consequently considered that he was not ill or under your care.

The Board regret the mistake, and wish you to continue to use the discretionary power reposed in all medical officers of the Union of ordering such articles as may be considered absolutely necessary for sick paupers. I am, Sir, your obedient servant,

ROBERT THOMAS, Clerk.

To H. Meymott, Esq., Medical Officer, Ludlow Union.

CAUSES OF DEAFNESS.—AURAL SURGERY.

To the Editor of THE LANCET.

SIR:—I conclude, as must every one who reads your Journal, that Mr. Curtis cannot authenticate his cases. I conclude so, because it would have been the most easy thing imaginable for Mr. C. to have given the addresses of his patients, and thus, at once, to have established the truth of his assertions, and to have dissipated all suspicions. By remaining silent, Mr. Curtis belies his principles; he does the greatest injury to "suffering humanity," and, instead of "advancing science to the utmost of his ability," he stands forward a determined impediment to its progress.

No, Mr. Curtis cannot authenticate his cases; and, in face of the assertions of himself and Mr. Wright,* I believe, for the reasons heretofore mentioned (all of which remain unanswered), that "deviations in the quantity and quality of the cerumen, exert no important influence on the function of the organ."

I confess that I cannot see what good object Mr. Wright had in addressing a letter to your Journal upon the subject under discussion. Look at the state of the case. Messrs. Curtis and Wright agree that deafness is produced by a deficiency of the secretion of cerumen; the former finds a remedy for this deafness, and he is immediately classed with quacks, and made the subject of attack by the latter. Ought not Mr.

* Wright on Diseases of the Ear, page 100.

Wright to be thankful and grateful to Mr. Curtis for this discovery? Is such conduct as this likely to make us disbelieve the assertion of Kramer, when he says, "Wright is surpassed in the shallowness and worthlessness of his treatise only by Stevenson and Curtis."* To Mr. Wright's advice that I should give my name, I reply that *my* object is not to advertise myself. If by writing these lines I do ever so little towards the upholding of truth and the stifling of quackery, I am satisfied. My cry is not "come and consult me—my name and address in full below." I nevertheless beg to assure Mr. Wright that I am not ashamed of my name; but until its publication will be attended by some advantage, I shall be satisfied with the initials "J. T."

In conclusion, Sir, I must, in common with the medical profession, express my regret that aural surgery is in so degraded a state in this country, that hundreds of deaf persons prefer remaining as they are, to placing themselves under the hands of aurists; and let me assure Mr. Curtis, and the numerous advertising gentlemen of his fraternity, that they, by their ignorance and cupidity, have brought the present odium upon one of the most interesting and important branches of surgery; and that they, instead of "relieving suffering humanity,"† have produced more misery than any other class of persons now living. To prove the worthlessness of such men; to expose them as a disgrace to society, and to the profession to which they pretend to belong; and, lastly, to endeavour to render aural surgery a scientific pursuit, instead of one calculated to bring discredit upon its followers, shall always continue to be the object of your obedient servant,

J. T.

* Kramer on the Ear, page 16.
† Mr. Curtis's words.

NECESSITY OF CORONERS BEING MEDICAL MEN.

To the Editor of THE LANCET.

SIR:—Had space permitted, I should certainly have subjoined some observations upon the narrative which I furnished you of the particulars of the Coroner's inquest upon a skeleton at Turnham-green, thirty years ago, just to prove how necessary it is that Coroners should know at least the A B C of anatomy. Had such been the case here, how much useless trouble had been saved to a jury of four-and-twenty persons, to say nothing of the horror and anxiety of the family whom it concerned.

Let us suppose for a moment that the Coroner had put some such questions as these to the medical man who attended:—"Are these bones male or female?" "Are they young or old?" "Are they the bones of a tall or short person?" "How long have they been interred?" All these questions might have been readily answered, and, of course, when a young man, six feet high, was the subject of inquiry (as was the case here), the inquest would have terminated satisfactorily, at least with regard to *him*, in a few minutes.

Had the bones of the pelvis been wanting, the sexual character of the skeleton might have been clearly defined by many other peculiarities; a single thigh bone, or only its superior part, with its cervix; the sacrum alone; a single clavicle; the skull, with its thin frontal bone, without frontal sinuses; the general lightness and extended surfaces of the female skeleton, are all sufficiently explanatory to one practised in anatomy, and would in an instant suggest to a Medical Coroner the necessity of such inquiries.

If, therefore, so much information is to be acquired by a view of the *bones* alone, what shall we say of the laws of physiology and pathology, a knowledge of which is *every day* required to enable a Coroner to direct his inquiries to the effect of diseases, and the destructive nature of poisonous substances upon animal life, in which some acquaintance with chemistry is also involved?

I believe, as a set-off against all these things, that a knowledge of the law of *evidence*, so much insisted upon by the lawyers, will make but a poor figure, particularly when it is considered that it is all comprised in a small printed treatise, and may be described in a much smaller compass; and, above all, that it is a qualification never doubted, but awarded by common consent, and with the concurrence of the Lord Chief Justice himself, to any gentleman who can afford to be made a justice of peace, with the full assurance that he will learn it, with *very little tuition*, from the attorney's clerk who sits at his elbow.

I am, Sir, your obedient servant,

F. W. C. PERFECT.

Hammersmith, Feb. 4, 1839.

NECESSITY OF CORONERS BEING MEDICAL MEN.

To the Editor of THE LANCET.

SIR:—The accompanying report taken from the "Times" newspaper, is of peculiar importance at the present moment, as it affords a practical proof, in addition to the many others which you so ably brought before the crowded meeting of your supporters at the Crown and Anchor, on Tuesday evening last, of the necessity for Coroners being medical men.

The deceased, a female, aged 26, gets wet, and in consequence gets *pneumonia*, for which she is bled and leeched. She dies. A post-mortem examination is made; the *body* is found *generally healthy*, but the *lungs much gorged with blood!* A poor terrier dog, *two months* before the death of the deceased, becomes very snappish, to *cure* which he is *confined* in a *beer cellar*. As is very natural, the dog is anxious to have a little liberty, and one evening he makes his escape from his dungeon, and runs into the parlour, where, finding his mistress, he salutes her, as any affectionate dog would, by jumping upon her and applying his nose to her face. He does not *snap* at his mistress; but is so eager in his affection that he is rather rough, and, in consequence, loosens one of her teeth.

The age of the unfortunate lady, her interesting condition, and her nervous temperament, all prove that the case was one of hysteria, in addition to the *fatal one* of *pneumonia*.

The Coroner was puzzled, the jury more so; the poor husband "had no suspicion that she was affected with hydrophobia, until informed of it by the doctor." The owner of the dog was threatened with a prosecution for manslaughter; the dog was slaughtered. Lieut. Hardy was recommended by the Coroner for a pension, and the Coroner at the same time bore his testimony to the frequency of *these* cases; a truism which none can doubt. The deceased died of pneumonia, and to crown all, the verdict returned was, death by *hydrophobia*.

Had an educated *Medical Coroner* presided, all this unnecessary aggravation of the husband's feelings would have been spared, and the public mind disabused of an opinion which was then very general regarding the prevalence of hydrophobia.

The quacks of the metropolis made a small harvest about the time this inquest was holden, and the walls were placarded, in every direction, with an account of places where medicine was sold, not alone for its prevention, but its cure!! I am, Sir, yours,

AN ELECTOR OF MIDDLESEX.

Jan. 30, 1839.

CORONER'S INQUEST.

Last evening, at 6 o'clock, a Coroner's investigation was proceeded with, before Mr. Payne and a respectable jury, at the Gentleman and Porter, New-street-square, on view of the body of Mrs. Sarah Johnson, aged 26 years, whose death was occasioned by hydrophobia, under the lamentable circumstances detailed in the subjoined evidence.

Mr. Francis Hutchinson, surgeon, of Farringdon-street, deposed, that he was called in on Thursday last to see deceased, and found her labouring under a great affection of the nervous system, difficulty of breathing, and trembling of the limbs. She stated that she had got wet the previous night, which accounted for such symptoms. Had not at this time the slightest idea that deceased was affected with hydrophobia. On visiting her on Friday morning deceased remarked that a dog, which belonged to her husband, had, some time since, struck her on one of the upper teeth with his nose with such force as to loosen it; no mark whatever was left externally, but part of the saliva from the dog's nose was left on her lips, and, she fancied, some on her tongue. Bled and leeched her, when she appeared much relieved. Saw her again at 5 o'clock the same afternoon in company with another medical man, when, from her manner, they were both perfectly satisfied that it was a decided case of hydrophobia. She showed terror at the sight of toast and water, and on Saturday discharged an immense quantity of saliva from her mouth, and died about 1 o'clock that day. Had made a post-mortem examination. Found the body generally healthy, but the lungs were much gorged with blood.

By the Coroner.—The deceased stated that the dog was destroyed about a fortnight since in Bridge-street, Blackfriars.

By a Juror.—Was positive it was hydrophobia the deceased died of.

The Coroner here said it was a strange thing he had not received information of the circumstances attending so important a case to the public as this was before it appeared to him; but for the information of Mr. Anderton, of Fleet-street, he should have known nothing about it. A more important inquiry could not possibly have taken place. It might turn out that the dog had been improperly let loose, and a point would then arise as to whether the owner would not be liable to a charge of manslaughter.

Mr. Hutchinson stated he was not aware that it was necessary to have an inquest held.

By a Juror.—There was no material difference between a person swallowing the saliva from a dog, or being bit by one. The symptoms were just the same.

Mr. Hutchinson here added, that another point in proof of the deceased having died of hydrophobia, was, that since death the lips and mouth were swelled.

A Juror here remarked that a root had been spoken of by Lieut. Hardy, in his travels through Mexico, called the "Sandilla," which had been found efficacious in instances of hydrophobia; and he wished to ask if it could not be procured in England.

Mr. Hutchinson replied he had not heard of it.

The Coroner said, if such was the case, the person who introduced it would deserve well of his country, as the frequency of these cases was most lamentable.

Mr. W. Johnson, the husband of deceased,

deposed that he resided at 27, New-street, Fetter-lane, and was a beer-shop-keeper. At the time he took possession he had in the house a terrier dog, which about two months since became very snappish, and in consequence of which he (witness) confined him as much as possible in the beer cellar. Had occasion to go down into the cellar one evening, when the dog ran up into the parlour where deceased was sitting. She exclaimed, "Poor Dan," when the dog rushed at her and struck her with his nose, as before described. Was alarmed at first, but finding no wound, no further notice was taken of the circumstance. On Wednesday evening deceased was taken ill, and on Thursday the medical man first examined was sent for, and attended her till death.

By the Coroner.—Had no suspicion that she was affected with hydrophobia until informed of it by the doctor. Between 5 and 6 o'clock on Saturday morning, deceased heard a dog bark, and then expressed her conviction that she was labouring under hydrophobia.

By the Jury.—Had not seen the dog since he flew at deceased, but heard that he had been destroyed in Bridge-street about a fortnight since. Was not positive that such was the case.

The charwoman who attended upon deceased deposed that the deceased was afraid of water, and had told her (witness) she never expected to get over it, and begged that she would look after her two children.

The Coroner having remarked upon the prevalence of such cases, and upon the extraordinary nature of the one before them,

The Jury returned a verdict "*That the deceased's death was occasioned from hydrophobia.*"

LEGAL KNOWLEDGE OF CORONERS.

To the Editor of THE LANCET.

SIR:—The officer of Coroner is of great antiquity; but the law of evidence is of comparatively modern date, and consists, for the most part, of a tissue of restrictions *against* taking evidence at all.

A Coroner, if he be a quibbling and capricious person, may reject a great deal of *useful* information. Hence the unsatisfactory verdicts which are every day given; and hence the perpetual cabals and squabbles between Coroners and juries.

Better far would it be, in such a Court as the Coroner's, to submit to receive evidence a little more diffuse, than to lose anything that really bears upon the case. From what I know of the law of evidence, however, I am satisfied that there is not one witness in ten but *may* be rejected, if the Coroner be but *a good lawyer*. I am, Sir, your humble servant,

A BARRISTER

New Inn, Feb. 5, 1839.

VISITORS OF HOSPITALS.

ACCIDENT CASES.

To the Editor of THE LANCET.

SIR:—You had the goodness to insert a letter from me, dated Dec. 11, 1837, under the first of the above titles. About two months afterwards appeared a letter in reference to mine, from Mr. Croxton, calling public attention to the merits of the "Hospital Accident Case Society," of which he was, I believe, the secretary. It gave me the most solid pleasure, as it will to my dying hour, that I was the accidental means of giving additional publicity to so good and sterling an institution. During the last summer I perceived a notice of the approaching annual meeting of the Society, under the presidency of *Mr. O'Connell.* I confess that I thought this choice of a chairman very injudicious, on the simple ground that this learned gentleman is a strong party man. Such an error, however, supposing it to be one, would not, I am sure, impede the public patronage of a benevolent object. Having been accidentally hindered from attending the above meeting, I looked with anxiety for a report in some one of the papers, but none appeared; nor have I since seen or heard anything of the Society, which is, however, I trust, in a prosperous condition.

The objects I proposed in my former letter were more extensive than is the field of action, however excellent, of the "Accident Case Society." In the account given by that eloquent and liberal traveller (though a Catholic priest) Eustace, of some of the "Confraternities" of Rome, I imagined a nucleus of British benevolence, which need not be ashamed of recurring to so ancient and classical a fount. It appears that in that city persons of all ranks, to the very highest, form themselves into a fraternity, whose object it is to "visit the hospitals." There can be no reason for doubt that this is done with the concurrence of the medical authorities, and with perfect deference to medical discipline and order. Let us imagine, then, a Roman or a Briton, it matters little, all are originally brethren,—

"Let Bourbon or Nassau go higher,"

if they can,—visiting a sufferer in the hospital, whether by "accident," or temporarily severe, or life-consuming illness; asking him "what can be done for him to mitigate his affliction?" Where his relations and friends are? What communication he would wish held with them (supposing him not able to make it himself)? What friend, clergyman, &c. &c., it would give him satisfaction to see, and how he is to be procured? Whether the *attendants* of the hospital are kind to him (for of the medical men I feel bound and inclined to have little doubt)? Whether he wishes to have anything stated

to the superiors which *they* would not do for him? What can be done immediately, or projected, for the benefit of his family, if much distressed? Whether it would give satisfaction to his mind to be *buried* in any particular place? (In Rome the "Fraternity" buries the deceased patients at its own expense, and attends the funeral.)

I am aware that much of this will be denounced as Utopian, in an age when there exists a bad spirit of considering the distressed as "doomed" persons, whose suffering a certain "political economy" considers unfit for its consideration. To persons, however, of warm and experienced benevolence, I would submit whether something really practical might not be struck out of these hints, "poetical" as they may appear at the first glance: and in their hands I leave them. If it be urged that there would be some occasional sacrifice of time, some trouble, something irksome or unpalateable, I would ask whether religion, philosophy, and nature, have not told us that this is but the fitting "penance" which the rich should submit to for their perpetual advantages over the poor? Let us but figure to ourselves what *we* should wish to find, under such afflicting circumstances, and then we shall not be slow to adopt a rule of action towards others. I am, Sir, yours respectfully, P.

Feb. 5, 1839.

IMPROVEMENT OF THE MEDICAL PROFESSION.

To the Editor of THE LANCET.

SIR:—Your persevering efforts in the cause of medical reform, and the beneficial results already experienced, together with those in expectancy, entitle you to the thanks not only of the profession, but of the British public in general.

Among other instances of reform, there are *two* in particular which I have long considered as important *desiderata*, in which opinion, I doubt not, you will concur, and most readily afford us the benefit of your very powerful assistance. The first which I shall offer to your notice and consideration is the mode by which the general practitioner usually receives remuneration for his services; and here I would submit, whether it be not repugnant to sound reason, and to the best feelings of every well educated man in the profession, or otherwise, that such remuneration should be dependent on the quantum of medicine supplied. Physic, being a combination of science and art, and one of the three liberal and learned professions, should not be suffered to remain in this state of degradation, as it thereby proves a fertile source of disputes and bad feeling between the profession and the public. I am perfectly aware of the difficulty of breaking up certain long-established customs, even where the innovation to be substituted would prove a decided benefit; but, in the present case, were members of our profession actuated by a more generous and friendly spirit towards each other, the obstacle would soon be surmounted by the adoption of at least the general assent to the new principle.

For the removal, therefore, of such an opprobium, I would beg to recommend, as the most rational kind of compensation, (exclusive of midwifery and operative surgery) the universal practice of a moderate charge *per visit*; say, 3s. 6d., 5s., or 7s. 6d. (according to the circumstances of the patient), inclusive of medicines; and medicines, when supplied without regular attendance, I would propose to be regulated by the druggist's price. This mode, if adopted by every regular practitioner, would prove a decided advantage to the patient, and would rescue the profession from the degraded state under which it has been so long permitted to remain.*

The second desideratum which I beg to notice, is the existing necessity for the establishment of professional tribunals, to hear and decide upon cases of delinquency and unprofessional conduct; such, for instance, as one man advancing his own interest by detraction and casting some kind of slur on the fair reputation of another, obtaining obstetric and other patients by urgent solicitations and offers to attend them under the usual fee, *cum multis aliis*, of a similar description; and all exhibiting an absence of that etiquette and gentlemanly feeling, which should place us in a position of superiority over the mere tradesman. I am also induced, Sir, to think that all glaring instances of incompetency should fall under the notice of such tribunal; *e.g.* an accoucheur permitting his patients to die undelivered, instances of which have occurred not long since within a short distance of my residence, where no pelvic deformity existed, and all attended by the same practitioner. So much for conceited ignorance and assurance.

The few preceding circumstances, as connected with medical reform, have been hastily noticed; yet, nevertheless, they are, perhaps, not less deserving the serious attention of the profession, and should any advantages be known to result from this communication, it will afford much satisfaction to, Sir, your very obedient servant,

A GENERAL PRACTITIONER.

Surrey, Jan. 29, 1839.

* As the charge for attendance is now become legitimate, is it not surprising that it should not be more generally employed?

REDUCTION OF ARSENIC.

To the Editor of THE LANCET.

SIR:—In THE LANCET of the 19th inst. there are some remarks from Dr. Wilks, respecting a modification of Marsh's arseniuretted hydrogen test. Dr. Wilks considers his apparatus to be a simplification of the original instrument; but I have been in the habit of seeing the test applied in a much more simple manner. A two or three ounce bottle is supplied with a cork that accurately fits it, and through this cork is inserted about three inches of the stem of a new tobacco-pipe. The solution containing arsenious acid is put into the bottle, together with the necessary portion of dilute sulphuric acid and zinc. The cork is then replaced, and, after waiting a second or two to allow the atmospheric air in the bottle to be displaced, the gas which issues (*i.e.* arseniuretted hydrogen) may be inflamed, and the arsenious acid which results from the combustion collected on any proper surface. For this purpose a plate of mica is the best thing that can be employed; but in the country this can but seldom be procured, and a piece of broken Florence flask answers every purpose; I believe this form of apparatus was first suggested by Mr. Pereira. Some practical experience enables me to affirm that it is quite a mistake to suppose that the arseniuretted hydrogen will all be dissipated whilst we are waiting for the escape of atmospheric air from the bottle. I am, Sir, your obedient servant,

JOHN SCOFFERN.

10, President-street, West, King-square,
February 1, 1839.

ACTION OF THE ALKALIES ON THE BLOOD.

To the Editor of THE LANCET.

SIR:—Will you allow me once again to occupy a small space in your Journal with some facts bearing in the most direct manner on the doctrines broached in the lectures by M. Magendie now in course of publication. The passage containing them is from Huxham's "Essay on Fevers," a work to which, I find, M. Magendie himself alludes in his lecture of to-day.

"Those who accustom themselves to take largely of volatile and fixed alcalious salts, spices, and aloetics, are always subject to these maladies (hæmorrhage and dissolved conditions of the blood). Not a few of those who took the *alcalious hotch-potch of Mrs. Stephens* and *soap-lees*, for a long time together, fell into hectical heats, a hot scurvy, hæmorrhage, dysentery, &c." The author then adds the case of a gentleman affected with calculus, in which he was himself consulted. The patient, after a course of *lixivium*, for several weeks, actually found his gums grow spongy, inflamed and livid, sore and putrid; livid spots also appeared on him, and his legs and thighs became of a claret colour. He died about a fortnight after, in a tabid state, and a calculus weighing ℥viij 3ss. was found in the bladder. Huxham ascribes the whole train of disorders to "an alcalescent putrid state of the humours, and a dissolution of the blood, from the course of alkalies the patient had gone through."—Edition 1769, p. 47.

I beg to submit this extract to the meditation of your readers, with the simple remark that Huxham was eminently a *practical* man. I am, Sir, yours,

SUUM CUIQUE.

January 19, 1839.

ENORMOUS DOSES OF ACETATE OF MORPHIA AND TINCTURE OF OPIUM.

To the Editor of THE LANCET.

SIR:—In reply to an inquiry in a late number of THE LANCET, respecting what have been the largest doses of acetate of morphia which have been given to adult persons, I shall feel obliged by your permitting me to state that I am acquainted with a gentleman who, for years, has been in the habit of taking opium for a disease of the spinal chord, attended with violent spasms of the muscles of the chest, abdomen, and inferior extremities, and who, every night for several months, took six grains of acetate of morphia, and, on one occasion, 25 grains of this medicine, divided into four doses, in the course of 24 hours. From the first to the seventh of July, a period of seven days, this gentleman took 540 grains of the extract of opium, and in the course of last year the enormous quantity of 24 quarts, one pint, 2 ounces, and 50 minims, of the tincture of opium. His usual dose of the tincture of opium is half an ounce, and what appears rather extraordinary, is the circumstance of the largest dose of morphia or opium having never procured beyond an hour's sleep, and the use of the medicines being unaccompanied by diminution of appetite or constipation of bowels. I remain, Sir, your obedient servant,

WILLIAM TEEVAN.

23, Bryanston-square,
Jan. 17, 1839.

UNIVERSITY COLLEGE HOSPITAL.

INJURY OF THE KNEE-JOINT.—FATAL SECONDARY HÆMORRHAGE FOLLOWING AMPUTATION.

C. C., aged 30, was admitted Nov. 18, 1838, under the care of Mr. Liston; he is a cabman, of nervous temperament.

History.—On Sunday last, when standing on the box of his cab, putting on his coat, he over-balanced himself, and fell between the shafts and the horse; he subsequently came to the ground and was dragged over a Macadamised road, when he received a severe lacerated wound of the right knee. He was kept at home during the week, and a surgeon attended him.

Present Symptoms.—He has extensive erysipelatous swelling of the leg, which gives him considerable pain; there is a profuse purulent discharge from the wound.

Treatment.—The limb was placed on an inclined plane, and Mr. Liston made an extensive opening on the inner side of the calf of the leg, from which a considerable quantity of pus was discharged, affording him great relief; he also enlarged the wound of the knee by a bistoury, guided on a director, so that no pus might lodge in it. Water-dressing to be applied. A sixteenth of a grain of belladonna every third hour.

Nov. 30. Passed a bad night; complains of great thirst and restlessness; profuse discharge both from the opening and the wound. Ordered an anodyne at bedtime.

21. Easier; had a better night; still discharge; slough of cellular tissue separating.

23. Took castor oil yesterday, it acted to-day; great prostration is felt; want of sleep; loss of appetite. Two grains of quinine, two minims of dilute sulphuric acid, and one ounce of infusion of roses, three times a day.

25. Great discharge from the wound, and pus is forming on the inner side of the thigh, immediately above the joint. Has all the symptoms of hectic.

27. Foot more everted than before, showing that the ligaments are implicated; constitutional symptoms worse.

Dec. 7. Worse since last report. Mr. Liston proposed amputation, the joint being evidently full of pus and diseased.

17. The patient having consented, Mr. Liston removed the limb to-day, at the junction of the upper with the middle third of the thigh, making an anterior flap. Several arteries were secured, and a piece of lint, dipped in cold water, laid between the flaps. Wine was given him, and he was placed comfortably in bed. In the evening, about five o'clock, Mr. George secured three small vessels, and at seven, five hours after the the operation, the oozing having ceased, and the cut surfaces being glazed, the flaps were brought together by means of three sutures, and several strips of isinglass plaster.

18. Perspired much in the early part of the night; slept well towards morning; tolerably free from pain.

19. Much better in general health; stump dressed to day; it looks well, part of it appearing healed by the first intention. A dose of castor oil, which opened the bowels.

20. One ligature came away to-day; the stump dressed; patient thinks himself better; sleeps well; appetite good. Wine, porter, and nourishing diet.

He appeared improving, and the stump seemed healing, when, on the evening of the 13th, hæmorrhage from the stump, to the extent of three or four ounces, took place, but was stopped by cold water applications. The stump did not heal by the first intention, and the strength of the patient was much reduced by perspirations and symptoms of hectic; quinine, cascarilla, and generous diet, with other remedies, proved of little effect; the stump discharged profusely. On the evening of the 26th, about seven o'clock, a sudden flow of blood took place from the stump, which reduced the patient to a very weak state in a few minutes. The house-surgeon being directly informed of this occurrence, readily stopped the hæmorrhage, by applying pressure to the femoral artery, by means of a key. Mr. Liston being sent for arrived immediately, when he proceeded to take up the femoral artery below Poupart's ligament. The operation lasted a very short time, and the ligature being applied, effectually stopped the hæmorrhage. The patient was now replaced in bed, and his pulse being scarcely perceptible, considerable doses of undiluted brandy were freely administered. He alternately rallied and sunk for some hours; but, towards morning, appeared to rally permanently, and fell asleep.

27. Is altogether in a very weak state, though not in such imminent danger as immediately after the operation. Stimulants and tonics administered.

31. Since last report has been gradually sinking. He died at a quarter past eleven o'clock to-day.

After death.—Examination of the Stump.—The ligature was found to have been placed about an inch and a quarter above the origin of the profunda, and immediately below the giving off of the internal circumflex, which was, however, in this case, a branch of inconsiderable magnitude. A clot had formed above the ligature within the arterial canal. Exfoliation had commenced at the lower extremity of the bone, and quantities of pus had collected amongst the muscles. The articulating surfaces of the diseased joint were also completely destroyed, the cartilages extensively absorbed, and the synovial membrane and ligaments disorganised.

In some clinical remarks on this case, Mr. Liston observed that this patient was doing

well, having been out of bed on the tenth day after the amputation, when he was frightened by a freak which was played upon him, and was never afterwards himself. The stump was nearly healed, when secondary hæmorrhage came on. The last bleeding was very profuse, twenty or twenty-four ounces being lost. When called suddenly to him, he found the patient at the last gasp, but he (Mr. Liston) was determined to take the only step which gave any chance of his recovery, that of securing the common femoral artery. He had, however, but faint hopes of the success of even that proceeding; the blood had become so attenuated that it no longer coagulated, and the sensibility was almost gone. Secondary hæmorrhage after amputations was a very common occurrence, but usually came on in a few hours after the operation. In such cases the treatment consisted in opening the stump, if it should have been dressed, washing away the coagula, and ligaturing the joints from whence the bleeding proceeded. This plan should also be followed when the hæmorrhage occurred even as late as forty-eight hours after the operation. When, however, the bleeding did not occur till the third or fourth week, or even as early as the tenth day, it was of no use looking for the extremity of the cut vessel, which was then in a soft and probably sloughy state, and would not hold a ligature. Under these circumstances, the only mode to be advantageously pursued was to weaken the flow of blood into the parts by the application of a ligature on the main vessel, at some distance from the stump. When amputation was performed below the knee, tying the superficial femoral would be sufficient; this step might also succeed when the limb was removed just above the knee, a point, however, at which amputation, in his opinion, should not be performed. When the operation was performed higher up, it became necessary to tie the common femoral close under Poupart's ligament. It would, however, be prudent to take up the vessel a little below the ligament in order to leave room for the formation of a coagulum between the deligated point and the origin of the circumflexia illi, or epigastric arteries. The ligament was to be the guide of the operator, for unless he were careful on this head, he might apply his ligature to the superficial femoral and be foiled in his effort to arrest the hæmorrhage. This accident had once occurred to himself, in a case in which the superficial artery was given off very high up. In general the common femoral, however, was two inches, or an inch and a half in length, and this accident would not readily occur. It was, nevertheless, always advisable to take the ligament of Poupart as a guide. Mr. Liston now slit open the femoral artery taken from this patient. He expected to find that little change if any, indeed, had taken place. The state of the patient was so reduced, and the blood so attenuated, that the changes which took place when an artery was tied in a healthy subject would not be found. In the latter case, a perfect coagulum would be formed and the artery blocked up; but in the case in question this could not be expected. There was but a mere strip of coagulated blood in the centre of the vessel. This fact was easily explained, when it was remembered that five weeks before the blood that issued from the stump was not thick enough to form a coagulum. It was a fortunate circumstance, Mr. L. observed, that bleeding from unhealthy stumps could be arrested by ligature of the vessel where it was sound. He had been obliged to resort to the proceeding repeatedly, and had witnessed and assisted in other cases of the kind, in bleeding also from sloughy wounds of the extremities, without meeting with any disappointment as to the expected result.

STRANGULATED FEMORAL HERNIA.—OPERATION. CURE.

M. E., aged 66, was admitted on the 19th of December, 1838, under the care of Mr. Cooper. She is by occupation a washerwoman, and is obliged frequently to make violent exertions when at work, to which she attributes the first appearance of a hernial tumour in the right groin, several years ago. She formerly wore a truss for about eighteen months, after which, as the swelling did not make its appearance as at first, she left off the truss, thinking it no longer requisite. Two days ago, however, the hernial tumour reappeared, after she had exerted herself more than usual in washing. Soon afterwards she experienced much pain in the belly, followed by constant sickness and vomiting. She sent for her usual medical attendant, who tried to reduce the tumour by the taxis for a considerable time, but without any effect. When she was admitted the strangulation had continued for two days; her countenance had become pale and anxious; her pulse was 99, and rather feeble; and there was continued vomiting with hiccup. There was a small tumour in the right groin, of the size of a pigeon's egg, firm, elastic, apparently yielding under pressure, but reappearing when the hand was removed. The house-surgeon, Mr. Carter, tried the taxis for a short time, but finding that no good result was likely to be obtained, sent for the surgeon of the week, Mr. Cooper, who, when he saw the patient, decided at once upon the necessity of an operation. In dissecting down to the hernial sac several small cysts, containing a thin serous fluid, were exposed and laid open before the proper sac was arrived at. A mass of adipose tissue (the subserous cellular tissue) lay over the sac, and presented many of the appearances of a

portion of omentum. This being turned aside and the sac opened, a very small knuckle of intestine rose into view, of a deep port-wine colour. The stricture was removed by dividing the tendinous structures surrounding the neck of the sac, in an oblique direction, upwards and inwards; after which the protruded portion of intestine was returned into the belly.

After the operation, enemata of warm water, with a saline aperient draught combined with laudanum, were exhibited, with the effect of producing copious evacuations from the alimentary canal.

Dec. 20. Late last night, in consequence of the pulse having risen to 120, it was thought advisable to bleed the patient, and accordingly eight ounces of blood were taken from the arm.

31. For a few days after the operation this woman suffered under symptoms of peritoneal inflammation, but these were successfully combatted with the usual remedies.

Jan. 12. The patient is quite well.

COMPOUND AND COMMINUTED FRACTURE OF THE HAND.—AMPUTATION OF THE FORE-ARM.

W. S., aged 45, an engineer was admitted on the 4th of January, under the care of Mr. Cooper. He had received a severe and extensive injury, in consequence of his right hand having been entangled in some part of the steam-engine which he attended.

Several of the fingers, with all the metacarpal, and some of the carpal bones, were broken into numerous fragments, and all the soft structures, including the vessels and nerves in the palm of the hand, extensively torn. The man had lost very little or no blood. Mr. Quain, who saw the patient for Mr. Cooper, immediately removed the hand about three inches above the wrist-joint, by the double flap method. Five vessels required the ligature, and in the evening, when the oozing of the blood had completely ceased, the flaps were brought together with slips of the adhesive plaster, and supported by a tight bandage. No sutures were employed.

Jan. 8. The bandage was replaced to-day by a clean one; the stump is doing very well.

11. The chief part of the flaps have cohered with one another by the first intention. The man in other respects is quite well, and able to leave his bed. Most of the ligatures have separated and come away.

FRACTURE OF THE NECK OF THE THIGH-BONE.—GREAT POWER OF THE PATIENT OVER THE MOTIONS OF THE LIMB.

E. H., aged 69, was admitted on the 15th of October, 1838, under the care of Mr. Cooper, in consequence of a fracture of the neck of the left thigh-bone, produced by a slight fall upon the hip. She has considerable power over the limb, being *able to bend it upon the pelvis, and to rotate it upon its own axis*, but it is about two inches shorter than the other, and is everted, while on examination a distinct crepitus is perceptible to the hand. Although the limb was kept, by means of the long splint of Dessault, at perfect rest, and of the same length as the sound one, for about eight or nine weeks, as soon as the splint was removed the shortening and eversion of the limb returned to the same degree as before.

Jan. 1. She is able to walk about the ward by the help of a pair of crutches.

ST. GEORGE'S HOSPITAL.

AFFECTIONS OF THE KNEE-JOINT.

Speaking of these affections, Sir B. Brodie said:—"It is very rare for anchylosis of the knee-joint to occur from simple inflammation of the synovial membrane, uncombined with any other diseased action: the joint may remain stiffened for some time, but it very seldom remains permanently so. There is, however, an acute affection of the joint which comes on with very severe pain, and which is invariably followed by anchylosis. This affection is, I believe, one in which the cartilaginous structures are peculiarly implicated; for, in the space of a comparatively short time, you find them ulcerated and absorbed, and the bones growing together. At least this is always the case where you do not give mercury in the very early stage of the disease."

Application for Blistered Surfaces.—A patient had a blister applied over an inflamed bursa of the patella; the open wound became extremely sore, and suppurated. Sir B. Brodie ordered the following application to be used to it; it formed a sort of putty when mixed up, and was the best dressing for causing an inflamed blistered surface to heal kindly:

Prepared chalk; olive-oil, of each five drachms;

Rose-water, two ounces. Mix.

Erysipelas.—In spite of every care and caution that can be taken to prevent the irruption of this disease in the wards of the hospital, it occasionally comes; and for a few days assumes an alarming aspect, but has not of late put on that fatal character that we remember it to have done when the *hygèine* of the hospital was not so particularly attended to as it now is. We stated in a former number that some operations were temporarily deferred owing to its prevalence in some of the wards; it has now, in a great measure subsided, and the operations (principally of necrosis), have been performed, without any erysipelas resulting as a consequence. With respect to the

treatment pursued, we do not believe that anything very novel has been put into practice; cold lotions have been applied externally; and with respect to the internal treatment, it has been a subject of consideration with some, whether it should be "bark or no bark." Sir B. Brodie inclines, we believe, to the latter. He remarked a few days since, that in the period of febrile inflammatory excitement he had not seen bark do much good, and that during that stage of the disease all medicine had better be avoided, and the patient kept on wine and a light nutritious diet. When the period of exacerbation is gone off, and the skin becomes cooler, Sir B. Brodie then orders the patient to take the cinchona draught of the hospital three times a day. Mr. Hawkins has now a case of erysipelas in one of the female wards possessing some points of interest. A young woman was in labour of her first child; the labour proved a severe one, and she was obliged to be delivered with instruments. The perineum was ruptured in its entire extent (we believe). Erysipelas of a most violent character supervened, extending from the perineum down each lower extremity to the feet. It extended also up the mucous membrane of the bowel; apthæ formed on the tongue, and the patient sunk rapidly. The treatment, which was judiciously varied according to circumstances, consisted in mild alterative purgatives, to restore healthy alvine secretions, and the continued and frequently repeated exhibition of dietetic stimuli. Wine, brandy, eggs, porter, mutton-chop, with every other culinary restorative which the hospital cook could recommend, were assiduously exhibited, and with the very best effects. When last we saw the patient (on the 15th inst.) she was gradually rallying. Mr. Hawkins saw her every day, and gave very urgent directions at each visit with reference to the dietetic stimuli which were being given; strict attention to the diet of his patients forms one of the most striking peculiarities in Mr. Hawkins's hospital practice.

Bursal Abscess of the Hip-joint.—A woman was brought by a surgeon to the hospital, to have Mr. Keate's opinion upon her case. About three years since she perceived a swelling over the superior and inner region of the thigh; it has increased in size, and become more painful, within the last twelvemonth. It is now very nearly as large as a child's head, and she is able to bear it being freely handled without expressing much pain. At the upper and outer part there is some degree of hardness felt beneath the skin. The woman states that she has never had pain in the back or hip during its growth, and coughing gives no impulse to the tumour. Mr. Keate penetrated it with a grooved needle, and a drop of bloody pus rose to the surface. Sir B. Brodie, whose opinion Mr. Keate requested on the case, remarked that he should have expected to meet with serum there, but not with pus. The tumour was most probably connected with some bursa about the hip-joint; there was one part of it harder than the rest; he knew a patient who had a large bursa that came forward from under the gluteus maximus muscle, and one part of that was almost as hard as cartilage.

Excision of the Cicatrices of Burns.

A young girl was brought in on Sir B. Brodie's admission-day with the inferior mental surface bound down to the superior border of the chest by the cicatrix of an old burn. Mr. Cæsar Hawkins has treated some of these cases successfully, it is said, by soaking the cicatrix in neat's-foot oil, and the plan has been pursued in this case by Sir B. Brodie. On going round the ward, and approaching the bedside of the girl he observed that the late Mr. Earle's operation for removing such cicatrices was one that he did not at all like to perform; it had generally to be performed on parts that were in a morbidly diseased state. They were, therefore, always very painful to the patient; remained with an unhealthy and sloughing surface for some time afterwards, and were also very liable to terminate in erysipelas. He had performed the operation several times, but had never seen any great good result from it. The first case in which he performed it he was successful, and forwarded it to Mr. Earle for publication, but he had generally seen such results follow this operation as induced him very rarely to perform it. The tone and manner of Sir B. Brodie whilst making these observations proved how strongly he felt the truth of the sentiments he was uttering.

MALFORMATION OF THE FŒTUS.

To the Editor of The Lancet.

Sir:—As it is generally disbelieved by the members of the medical profession that any impression made upon the minds of women during the process of gestation, can have any influence in producing marks on, or deformity of the fœtus, and as the question is one which requires for its decision the relation of well-authenticated cases, I take the liberty of laying before the profession, through the medium of your Journal, the following interesting case, which has just occurred in my practice.

I was requested yesterday morning, the 30th inst., to attend Mrs. A., who was in labour of her first child, having been married about eleven years. She had been in labour twenty-four hours; her pains short and accompanied by a constant dribbling

of dark-coloured liquor amnii. About six o'clock the uterine action became stronger, and in two hours after she was delivered of a dead acephalous fœtus, which was about the size of a five months' child. The eyes, nose, and mouth were perfect, but were situated upon a small fleshy protuberance between the shoulders, and looking directly upwards. There was a small tuft of hair on the posterior surface behind each ear, beneath which were two minute portions of bony structure, and between them a small fleshy excrescence, but no other vestige of a cranium. Anteriorly the bones of the face seemed perfect, but the integuments covering them were joined directly to the superior portion of the sternum. The arms were of the usual length of those of a full-grown child, and the shoulders had the appearance of being raised, with the facial portion of the child sunk between them. Mrs. A. declared that she had gone her full time, and that she had felt the child from last October to within a few days of her confinement.

As she was of an irritable habit I directed the attendants to carry the fœtus to my residence, and I informed her that as the child was dead and offensive, she could not be permitted to see it. Upon visiting her this morning I found her doing well, but extremely anxious about the fœtus, and she questioned me closely whether it had any deformity. To satisfy her I told her that I would inform her all about it when she recovered. She then told me that her reason for asking the questions was, that she had been frightened during her pregnancy, and described the circumstance as follows:—

She stated that about six weeks after the period from which she dated her conception, she answered a knock at the door, and that when she opened it she started back at the appearance of a deformed beggar, who she described as having his head drawn down between his shoulders, which, to use her own words, "seemed almost buried in his body." She shut the door hastily, and was so frightened at his appearance that she was ill for some days, and could get no sleep at night in consequence of the horrible impression which the mendicant's deformity had occasioned.

Startled at the singular and accurate description which she had given of the appearance of her own fœtus, I returned home and took it out of the spirits in which I had placed it, to make a more strict examination. I laid it upon the table, and it would be impossible to conceive a more exact resemblance, or to have a more perfect illustration of her description of the appearance of the beggar, than the object before me afforded. There were the raised shoulders, the arms hanging by the side, and the head sunk, as it were, in the body,—the very personification of the phantom which the object of poor Mrs. A.'s alarm had indelibly fixed in her mind.

It must be remembered, in reflecting upon this singular case, that Mrs. A. is to this moment unacquainted with the nature of her child's deformity. I divided the umbilical cord, folded the fœtus in a napkin, and sent it immediately to my house. When I visited her this morning I was in perfect ignorance of her ever having been frightened. I never questioned her upon the subject; her tale was told voluntarily, and I am quite certain, from the nature of her queries, that the attendants have obeyed my strict injunctions not to give her the slightest intimation of the fact of her having given birth to a monstrosity.

As the subject possesses much interest in a physiological point of view, perhaps the following will not be out of place by the side of the above case, and as it occurred in my own family I am quite positive as to the truth of the facts:—

A lady was walking in the streets of Liverpool, in the second month of utero-gestation. She was suddenly accosted by a beggar with an extensive cutaneous nævus covering entirely one side of the face. The lady was much frightened and increased her pace. Taking advantage of her alarm, the mendicant pursued her, and suddenly caught hold of her wrist to stop her progress. She threw him some money, hurried home, and directly she got into the house fainted. She was impressed during the remaining period of gestation with the idea that her child would be marked, and her first question after it was born was to ascertain whether it was so or not. The child was born with a cutaneous nævus, of a deep-red colour, upon the wrist, where it remains to the present day.

These facts are curious, to say the least of them, and as hitherto the notion has been treated with ridicule that any impression upon the mother can affect the fœtus in utero, perhaps you will give them insertion in your Journal; and as authenticated cases are the only means by which the question can be decided, you will not think the subject of too little importance to invite other members of the profession to relate the results of their experience. I am, Sir, your obedient servant,

C. R. Bree.

Stowmarket, Jan. 31, 1839.

THE PLAGUE AND QUARANTINE LAWS.

LETTER FROM CLOT BEY.

A late number of the "Journal des Debats," contains the following extract of a letter addressed by Clot Bey to M. Chervin:

"My most ardent wish is to witness the triumph of the cause which you defend with

so much zeal and talent. I often regret that you were unable to join us during the recent epidemic in Syria. Egypt will long remain, I fervently trust, free from the malady; but if (as there is reason to fear), it should break out amongst us, I would advise you to undertake the voyage, although experiments made under atmospheric influence might not be so conclusive as we could desire them to be. I agree with you in thinking that all experiments relative to the contagious nature of the plague should be made in some locality free from the epidemic influence of the disease; but how can we expect to obtain this permission, when all questions connected with the plague are regulated by Boards of Health which are composed of men firmly attached to antiquated theories, incapable of following the march of science, and terrified out of their wits at the mere name of plague?

"The Board of Health at Alexandria, which is formed, as you know, by the Consuls of the different powers, presents, at this moment, one very curious circumstance. Mr. Thurburn, the English Consul, has just addressed an excellent memoir to his colleagues, in which he demonstrates that since the establishment of quarantine in Egypt, seven years ago, it has not produced a single beneficial result. On the contrary, the effects have been most disadvantageous. Mr. Thurburn is so convinced of this that he has declared his intention of retiring from the Board of Health if the latter continued in the old routine of error and obstinacy. The English Consul, now more than sixty years of age, is a man of cool reflection; he has lived in these countries for the last thirty years, and is, therefore, above all suspicion of rashness or ignorance. Mr. Thurburn's memoir has been forwarded to the General Board of Health, sitting at Cairo, who have called to their assistance six of the medical men most conversant with the plague, in order to deliberate on the matter.

"I have seen a good deal of Dr. Bowring, whose name is so well known, from his works on political economy, and the important mission which the English Government have entrusted to him. Dr. Bowring has also directed his attention to the plague, and has pronounced a decided opinion on our barbarous, vexatious, and destructive sanatory regulations. Thus, my dear friend, we have the pleasure of seeing the number of contagionists daily decrease, and I trust that the day is not far off when quarantine regulations will be completely reformed, if not altogether abolished."

THE BLOOMSBURY "PHENOMENON."

"Ye little stars!"

"In fact, he is, in medical literature and science scarcely less clever and prolific than were Lope De Vegas in poetry and the drama, Swift in everything short of natural science, Sir Walter Scott in historical romance; not forgetting a host of other extraordinary men, such as Priestly, Voltaire, D'Alembert, Bayle, Scaliger (which of the two I forget), &c., all in their respectively voluminous and highly useful departments."

Such, reader, is a specimen of a modern certificate; we leave to your ingenuity to divine the name of the literary "legion" who equals De Vegas as a poet, Scaliger as a critic, and Scott as a romancer.

OBITUARY.

John Miller the Mechanic.—This talented though humble individual, so remarkable for his extraordinary passion for dissection, whose paper entitled "Discoveries in Embryology" found a place in our Journal in April last,* and a "Sketch" of whose life we published in the following month,† has paid the debt of Nature. He expired on Sunday, 20th January, at his residence in Broad street, Golden-square. It is gratifying to learn that the privations to which he alludes in the "Sketch" were considerably mitigated, ere his life drew towards a close, through the kindness of several medical friends, nothing which attention or benevolence could contribute towards his personal comfort being withheld. Miller had suffered from frequent pulmonary attacks, the consequences of which were displayed, early in September last, in the existence of confirmed tubercular consumption. A post-mortem examination was made, the results of which may perhaps be communicated in a future Number.

* See Lancet, April 7, 1838.
† See Lancet, May 26, 1838.

TO CORRESPONDENTS.

We cannot perceive that any advantage could arise from the publication of Mr. Wadsworth's second letter. The explicit denial of Dr. Roe, which we published in our last Number, should, in our opinion, be received with at least as much credence as the affirmation of any other individual. Had we been aware of the existence of Dr. Roe's note to Mr. Wadsworth, we certainly should not have published the letter of the last-named gentleman.

W. J. may be a very honest man, but we cannot instruct any one in the mode of unmarking wearing apparel.

Communications have been received from *A Student*, *Lachin y Gair*, and *Mr. Place*.

We cannot give insertion to any communication relative to a secret remedy. *Mr. Marshall* may, therefore, receive his paper on cataract from our publisher.